NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. X. BOSTON, OCTOBER, 1858. NO. 10.

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CALENDAR FOR OCTOBER.

Those virgin leaves, of purest vivid green,
Which charmed ere yet they trembled on the trees,
Now cheer the sober landscape in decay;
The Lime first fading, and the golden Birch,
With bark of silver line; the moss-grown Oak,
Tenacious of its leaves of russet brown;
The ensanguined Dogwood; and a thousand tints
Which Flora, dressed in all her pride of bloom,
Could scarcely equal, decorate the groves. *Aiken.*

OCTOBER, like every other month, has its peculiar characteristics, characteristics which, omitted, or changed for those of some other month, October would be October no longer. "The month that we have just left behind us was made up, for the most part, by consummations; the promises of the year being almost forgotten in the fulness of their performance, and the season standing still to enjoy itself, and to let its admirers satiate themselves upon the rich completeness of its charms. It is now gone, and October is come; and Hope is come with it; and the general impulse that we feel is, to *look forward again*, as we have done from the beginning of the year."

SEPTEMBER brought most of the crops to perfection—the small grains, and golden corn, the delicious fruits and substantial apple, continuous through the year, and excellent in so many forms, while some of the roots, careless of the frost, retain their rank foliage until severe cold weather sets in, and only yield to the united power of frosty nights and warm OCTOBER suns. The grass grows brown and sere, and cattle feed with cold noses, or look wistfully at the barn for a supply from their winter stores.

So in the animal kingdom; OCTOBER brings its influences upon them. Crickets are black and lusty, and full of song, and feed eagerly upon the apples left in their way. Scarcely a swallow of all the thousands that twittered about the barns, is left; the martins, also, that enlivened the cottage with their social habits, followed their instincts and are probably now passing a seasen of rest in milder climes with their young reared with us. The faint chirp of the bob-o-link that was occasionally heard high in the clear air late in SEPTEMBER, has now entirely ceased, and the numberless meadows made vocal by them in the Summer months, cannot claim one among them all to-day. They have now become objects for sportsmen on the margins of the Delaware, Potomac, and other rivers, where they collect in vast numbers to feed on the wild oats which abound there, and are called *Reed-birds*. Those that escape the slaughter here, continue their course still further south, and in the rice fields of Georgia and the contiguous States are esteemed a great delicacy as *Rice-birds*. But the Field Lark still springs from the grass, perches upon the highest twig of the old apple tree, and whistles as in JUNE. The Blue Jay, startled in her solitary haunts, screams and flies to a thicker retreat, making the woods ring with her energetic notes. Some of the smaller birds remain, but day by day become less frequent. But the year, in "all its aspects, has reached its grand climacteric, and is fast falling 'into the sere and yellow leaf.'" Every day a flower drops from out the wreath that binds its brow—not to be renewed. Every hour the sun looks more and more askance upon it, and the winds, those summer flatterers, come to it less fawningly. Every breath shakes down showers of its leafy attire, leaving it gradually barer and barer, for

the blasts of winter to blow through it. Every morning and evening takes away from it a portion of that light which gives beauty to its life, and chills it more and more into that torpor which at length constitutes its temporary death.

And yet October is beautiful still, no less for "what it gives than for what it takes away, and even for what it gives during the very act of taking away." It has its aspects of decay, and its aspects of unsurpassed attraction and beauty.

Aikin observes, the gloom of the falling year is in some measure enlivened during this month, especially by the variety of colors, some lively and beautiful, put on by the fading leaves of trees and shrubs.

In fine weather many plants yet remain in flower which belong to summer; indeed, most of the summer plants still hold out a few flowers from their wet and semi-rotten stocks, which in a fine sunny noon would almost remind one of summer, were it not for the quantity of dead leaves which now cover the ground, and the deep autumnal coloring of those which remain on the trees. The Ash by this time has oftentimes quite cast its leaves; those of the Elm are greatly thinned, and the rest quite yellow. The Poplars are fast following, and the light foliage of the Mountain Ash lie scattered like its mouldering red berries, on the ground. The Beach, the Hornbeam, and the Oak, retain their leaves the longest, and even keep them all winter. Of fruit trees the Cherries, Apples and Pears are now shedding their leaves, while the Mulberry retains its green leaves to the last, and often keeps them all till the first smart frost, when they fall all at once. We have seen them drop on the rising of the Sun, after a frosty night, altogether like a shower. The fall of the leaf can be considered only as a "sloughing or casting off diseased or worn out parts," whether the injury to their constitution may arise from causes or from an exhaustion of their vital powers. Hence a separation takes place, either in the footstalk, or more usually at its base, and the dying part quits the vigorous one, which is promoted by the weight of the leaf itself, or by the action of autumnal winds upon its expanded form.

> The woodpath is carpeted over with leaves
> The glories of autumn obey;
> The Goddess of Plenty has bound up her sheaves,
> And carried the harvest away.

October presents many calls for the care and skill of the good farmer. Such of the *roots* as are most able to resist the frost and were left to mature under the friendly October suns, must be secured before the nights become too cold.

The *seed corn* should be selected before the general harvest takes place.

The *cider* should be made, and whatever care is bestowed to make it in a cleanly manner, and of sound apples, will be more than repaid in the excellence of the cider.

Potatoes, before the rot was known among them, were considered safer in the ground than in the cellar, until the frosts became quite severe. If they have remained sound until the first of the month, they will probably remain good, if not dug until late.

Apple trees may be transplanted advantageously in this month; a few days after the leaves have fallen from them, is a suitable time to dig them up for setting.

Next to June, October is a favorable time for *pruning*, and in the still and mild days it is a delightful employment.

The subject of *draining* is now attracting considerable attention; this month usually affords a good opportunity to engage in it.

Do not allow cattle to depend too long upon the frost-bitten grass,—but feed them liberally morning and evening, and they will be likely to enter upon their winter fare all the better for it.

October presents many opportunities for recreation and enjoyment, and the farmer and his family, surrounded as they are by pleasant associations, ought to be grateful and happy.

For the New England Farmer.

THE GROWTH OF TREES.

Trees grow faster or slower, according to the wetness and warmth of the season and richness of soil in which they are planted. By looking at the stems and branches of trees it may be seen at once how much more trees grow in one year than in another. In examining a white pine limb I found the growth was as follows: In 1851, the growth was small; in 1852, much shorter; 1853, very long; 1854, middling; 1855, long; 1856, short; 1857, long; 1858, long. An oak limb measured, gave a length of four inches for 1856; eight inches for 1857; seven inches for the present year, which has nearly closed for the growth of trees. The stumps of trees show the sam thing. The grains are wider or narrower, as th season has been favorable or unfavorable. Th leaves of trees are larger or smaller, as the season is wet or dry. In corn, wheat and rye, the influence of the season is attentively noticed, but in trees we seldom stop to measure the extent of their growth or the increase of their size. We feel no richer, nor poorer, for any influence the season may have on them. And yet a genial season promotes their growth as much as it does grass or grain. In a genial season, the fruit of trees is not only magnified, but multiplied, by the rapid growth of the branches. In general, a good grass year is a good tree year, though not always a good fruit year. The orchards and the woods are hard drinkers, and enlarge their dimensions accordingly.

The growth of trees is retarded or increased by the same causes which retard or increase the growth of grasses and grains. If apple, pear or

cherry trees are left to grow without manure or culture, they do not grow faster than Indian corn treated in the same way. Weeds, grasses and oushes take away the moisture and nutritious particles of the soil, just as they do from corn and rye. In a word, their growth is blasted.

Nothing is more common than for one tree or plant to blast another by abstracting its moisture and nourishment, and by obstructing its light. Notice the little trees growing in the vicinity and shade of larger ones. We all know how quickly weeds and grasses blast Indian corn by absorbing the moisture and manure of the surrounding soil. If we wish, therefore, to raise an orchard in the shortest possible time, we have only to treat it precisely as we do a cornfield. The trees must have a nursery-treatment until they attain to a middling size. Neither weeds, grass, nor any other plants, should be allowed to grow near them or in the same field. The trees should every year be manured with rich compost, and kept well plowed and hoed. They will then have nothing to impede their growth, and will rapidly attain to a large size. An orchard treated like an Indian cornfield, where fifty bushels to the acre are expected, would be none too well to experience the full benefit of the agricultural art, as it may be known at the present time. Under such a treatment they will attain to a greater size in seven years than in twenty, where they are left to themselves in an ordinary soil, to contend with weeds, grasses and bushes of all descriptions. Mind it where you will, those apple trees which grow near houses and barns, where the soil is the richest of any part of the farm, always grow rapidly, yield fruit abundantly, and of the largest size. Never be afraid of making the soil too rich; the richest new land has never been found too much so for fruit trees. Any land which is good for Indian corn, rye and wheat, is good for an orchard of apple trees. But avoid low, wet, clayey land, or land adapted to marsh grasses. It is neither congenial to the tree nor the fruit. People are so much accustomed to seeing orchards grow in a slow way, without manure or cultivation, that they are discouraged from planting them. Their patience is taxed too severely. In general they see the trees growing, or rather existing, twenty or twenty-five years, before they attain even to a middling size, whereas thrifty nursery trees three years of age, set in a genial soil, may easily be made to yield fruit in good quantity in four years more. Many trees in a genial soil grow as rapidly as Indian corn. They will show as great a length of stem, in the same time. If you wish to raise a large tree in a short space of time, you must give it as much food and drink as it wants, in the same way that you raise a large calf or a large turkey. Drink, especially, is everything to a tree, and, nothing else should absorb it. To serve them rightly, they should, in a dry time, be watered artificially.

RURAL ARTS.

Providence, R. I., July 1, 1858.

WHITE WINTER FLINT WHEAT.—A specimen before us from Mr. EDWIN TOWER is very fine indeed; the berries are large, plump and clear. It was raised on his grounds at South Hingham, and at the rate of *thirty-two* bushels per acre. Such wheat is well worth $2,50 a bushel for seed. *Fifty-five* dollars an acre, beside the straw, is a good product. We are quite confident that our people do not yet fully appreciate the value of this crop. A single acre of wheat like this on one of our small New England farms is an item of importance to the family, as it would leave the cash usually expended for flour to pay taxes or grocery bills.

For the New England Farmer.

MOVING POWER OF MOWERS.

An "old subscriber" asks whether oxen can be advantageously used in the mowing field for the cutting of grass? I think not, when horses can be had, because horses are more conveniently guided, and are more expeditious in their movements. On a neighbor's farm I have seen a *Ketchum's Mower* operated for several years by ox-power, and my impression has been, it was not the best of power for this purpose. It will do when no better can be had, but it is not a power to be recommended. So habituated are many of our farmers to the labor of the ox, that they seem to have no idea of anything being done without them. It is fair to say, that a pair of horses will move one-third faster than oxen, and that the driver can be better accommodated, when sitting upon the machine, than by being on foot by the side of the oxen. When thus on the machine, he can better adapt it to unevenness of surface or any obstruction that may be in the way; for very few of our fields are so completely even and smooth, as not to need these precautions.

The best mowing I have witnessed has been done by *Allen's Machine*. This moves with comparative ease of draft and without clogging. It will cut a swath full four feet wide, and when the team moves at the rate of three and a half miles an hour, it is easy to show that an acre an hour can be completed, leaving sufficient time for rest and repairs. I do not mean to say that other machines will not do equally well—I only speak of what I have actually witnessed.

Sept. 4, 1858.

ESSEX AGRICULTURAL SOCIETY.

The records of this time-honored Association show that the office of President has been holden as follows: by

T. Pickering, from 1818 to 1828	10	years.
F. Howes, from 1828 to 1831	3	"
E. Mosely, from 1831 to 1836	5	"
J. H. Duncan, from 1836 to 1839	3	"
J. Kittridge, from 1839 to 1841	2	"
L. Saltonstall, from 1841 to 1845	4	"
J. W. Proctor, from 1845 to 1852	7	"
M. Newell, from 1852 to 1856	4	"
R. S. Fay, from 1856 to 1858	2	"
	40	years.

Of whom Messrs. Duncan, Proctor and Fay still live. Its vested fund exceeds $10,000, and it has an experimental farm, valued at $6,000. Few societies have been more faithful to their trust—long may it prosper.

LETTER FROM MR. BROWN.

Newport, N. H., Aug. 12, 1858.

DEAR SIR:—Descending from the Francestown range of hills, I passed through portions of Deering, Antrim, Hillsborough, Washington and Goshen, to this place. Newport is the shire town of Sullivan county, has its Court-House and other public buildings, and is a pleasant and flourishing town. The *New Hampshire Argus and Spectator* is published here by Messrs. CARLETON & HARVEY, and the "Sugar River Bank" issues its handsome notes for value received. This town was the residence of Gov. METCALF during the time he occupied the gubernatorial chair, and is so now of the Hon. EDMUND BURKE, a member of Congress for two terms from this district, and subsequently Commissioner of Patents at Washington. The village nestles among the hills which surround it, and is skirted on its southwest borders by beautiful meadows through which flow the waters of three distinct streams, each bearing the name of Sugar River. These streams unite near the village, and then the waters go on their way through the town of Claremont to the Connecticut river.

The soil in this town is of three kinds; *alluvial* on the borders of the streams, forming rich and fertile meadows; back of these more dry and *gravelly*, and *moist* and *cold* on the hills and more elevated parts. Some of these lands are cultivated by skilful farmers, and afford all the substantial comforts of life. Fine horses, working oxen and beef cattle are raised here, while other products in various portions of the town, are mutton, wool and butter. Farmers in this region have not yet introduced the culture of roots for feeding to stock, and most of them, I think, do not appreciate their value for this purpose. I once had strong prejudices against the use of roots for cattle, unless it were for a period during the process of fattening, and it was only by careful reading and observation, added to actual experiment, that I became convinced that my prejudices were not well founded. It is my opinion, that the farmers of New England, with little or no more labor than they now bestow upon their farms, *can double their capacity for keeping stock, by the gradual introduction of root crops,—and that when the stock is doubled in amount, their profits will be equally increased!* I have often expressed this opinion before.

NICHOLAS BIDDLE, distinguished as he was as the chief engineer of the affairs of the U. S. Bank, was *a better farmer, than financier*. He was a man of great personal beauty, of the most acute observation and of versatile talent. His manners were winning, his voice full, rich and melodious, and he possessed such a just combination of graceful ease and dignity as to attract persons of all classes to himself, without any apparent effort on his part. Such is the account of him given me by the widow of the late Commodore Stewart, who knew him intimately, boy and man, during the whole of his life. In England, such a person would not only be competent to judge of what he saw, but would be at once favored with every possible facility for investigating any subject of his inquiry.

In an address of his delivered before the Philadelphia Agricultural Society in 1842, he made the following interesting and important remarks: —"It is strange how things so lowly acquire national importance. *The best farming is that which will give the greatest mass of sustenance to animals*—since the less land required for animals, the more can we give for the maintenance of human beings. That fine farming region, England, had reached the limit of its power of supporting animals—since it turned to the root culture it has more than doubled or quadrupled its power, and now, odd as the mingling of such dissimilar notions may seem, it is scarcely an exaggeration to say, that England's power is based upon its *iron*, its COAL, and TURNIPS." I am aware that the English farmer possesses advantages that we do not, in the mildness of his climate, which saves to him most of the expense which we must incur in harvesting and housing roots. Still, however, I am confident that an intelligent and certain progress in profits, will require us to resort to the cultivation of root crops. The expense heretofore attendant upon it will undoubtedly be materially lessened by implements better adapted to their culture, and by the experience to be gained in the production of a succession of crops. The opinions expressed by Judge FRENCH on this matter, since his agricultural tour in England, strongly confirm those which I had formed. A portion of the soil here, as in all the towns of New England, is well adapted to the common flat turnip, the ruta baga, carrot, red and white beet, parsnip and mangel wurtzel, and the climate is also favorable to each.

The country through which I travel presents quite an unusual appearance now in consequence of the great amount of grass remaining uncut. The cloudy and damp weather, rather than a large amount of rain, has prevented the cut grass from drying, so that nearly one-half of the upland or English crop, and most of the meadows, are now standing, while much that *is* secured was out from three to ten days in the process of curing. The haying season has been one of care and anxiety to the farmer; he could not secure the crop, and he could not leave it to engage in other labor, so that the cost of securing what he has got has been double of that necessary in good weather. Hay will be abundant, but the quality inferior

compared with that laid up in dryer and warmer seasons.

It is not intended as a compliment to New Hampshire, I suppose, when it is said that it is a good State to emigrate *from*. Better would it be for thousands who stray to regions of gold, or even to those of less glitter and pretension, if they would settle in New Hampshire and feed cattle upon a thousand hills, or cultivate its rich valleys, or rear hardy and intelligent boys and girls to become the future glory and strength of their country. I meet no more sensible, independent and hospitable people anywhere than I find in the Granite State,—and if there is any scarcity of the gentler sex in the Bay State, I commend the girls up here to the respectful consideration of those young bachelors who are seeking a yoke fellow "down in your parts." SIMON BROWN.

Joel Nourse, Esq.

RESTORATION OF EXHAUSTED SOILS.

The term, *worn out soil*, is of common use, and still no such soil ever existed. Any soil which has ever been fertile, is capable of being rendered so again, and without the addition of any new material, but only by altering the condition of the soil's constituents, by presenting conditions analogous to those which Nature has always used to render soils fertile. All soils are made up of *powdered rocks*, rendered fine by the various operations of nature, and composed only of the constituents of rocks and such other deposits as under peculiar circumstances may be received from the atmosphere—such as carbon, from its solidification in plant life by the decomposition of carbonic acid gas taken from the atmosphere, intermixed with which it is held in suspension.

Neither the presence, however, of all the primaries required for plant life in a soil, nor indeed of all the primaries in nature, will insure plant-growth. The *condition* of these primaries, and not their presence alone, is necessary to successful vegetation. When portions of the earth's crust, known as soil, have been many times in plant form and return again to the soil, then those portions are rendered capable of forming parts of such vegetable growths as men and animals now require, and when these are removed from the soil by the continuous removal of crops, it will then cease to be fertile until new portions are progressed by the same or other means. At the same time all may know by the help of the chemist, that the constituents of many soils, for the time barren, are the same as those of fertile soils, by name, but differing only in condition. The whole soil, from the earth's surface to the undecomposed rocks below, as a rule, contains the constituents of plants, and therefore cannot be said to be *worn out*, but requiring the *progression* of a portion of these constituents, viz., an alteration in condition, before they are available to plants.

Considering the earth's surface then as an endless or inexhaustible source of raw material, from which plants may be created, it only remains to ascertain the means of placing these raw materials in proper condition for assimilation, and we have a method for restoring what are usually called *worn out soils*. What changes must occur in the particles of the soil to produce the necessary changes in condition, so as to insure their appropriation in plant life! It is evident that at least these particles must be rendered soluble in water; thus silex is only soluble after its chemical combination with an alkali, and indeed every constituent requires some change before it can be used as the food of plants. Let us see what probably occurs in fallow soils, or those bearing no crops: the circulation of atmosphere between the particles, (and there can be no chemical changes without such condition) deposits upon the cold surface of every particle a thin film of water, which being thus extended, takes up carbonic acid, increasing its power as a solvent, and by dissolving minute portions from the surfaces of particles, open these prison houses and permit new constituents to be affected in turn by new potions of carbonated water, which upon the receipt of each ingredient thus freed from their resting-places, is rendered capable of freeing another by chemical change, until in course of time the land contains a fair proportion of its own constituents in a progressed condition. All this progressed plant-food is slightly soluble under certain circumstances, and in this way bare fallows, as they are called, imitate vegetable growth by progressing plant constituents. Do we not see this operation continuously going on in nature? and should not the art of the Agriculturist be to avail of such natural laws as are applicable to fallows in a more rapid manner? We claim that this may be done so as to cause a single year to represent the effects of a century; every particle of soil, if viewed through a microscope, imitates in appearance the rock from whence it came, and its analysis will show the same constituents; nature's laws debridised the rock and gave us the particle, it becomes our business to facilitate the continuation of the operation of these laws on the particle, to insure its still further division and consequent exposure and change of condition of its constituents.

Some of the so called barren soils of Massachusetts being coarse pebbles and gravel, contain the same primaries as do the fine soils of the Miami Vally, but are the conditions of these constituents alike? And will the ordinary analysis offered by chemists who are incapable of recognizing these conditions, show any difference between the two soils, the one fertile the other barren? Will a cabbage grow upon a granite rock? And does not this rock contain all the inorganic constituents required by the cabbage? Will it grow in the powder of this rock, if finely ground, until after it has been exposed to atmospheric influence and proper state of humidity for so long a time, as to free portions of its constituents and progress them for plant use? Would not the powder of the granite rock placed immediately over an under-drain exhibit these conditions in a single year? We answer yes: and we say fearlessly that many soils which are comparatively barren for want of progression, may be rendered fertile by thorough draining and subsoil plowing, if left in bare fallow, but that until a portion of the constituents be so acted upon, the continued change will be comparatively slow,

hence the necessity for adding to soils suddenly placed in a condition for restoration, such materials as fertilizers, as will furnish all that may be required by the growing crop if to be removed from the surface. Under such circumstances the progressed portion, freed from the particles of soil, are not removed by the crop, while the process of growth materially hastens the continued development; the amount of moisture and gases sent coursing from the soil into and through the plants, causes the reception by the earth of new portions from the atmosphere, while the decay and solution of the roots of plants in the soil leave new openings for atmospheric ingress and ensure the deposit of the primaries yielded up by the decay of the roots. Therefore, we say that worn out soils may be restored in degree by continued or frequent disturbance; the restoration will take place to a still greater depth and much more perfectly, as well as in much less time, by under-drains and sub-soil plowing, even with a bare fallow surface; still more rapidly if crops be grown upon the surface and plowed into the soil; more rapidly still, where well chosen fertilizing materials are used to supply the wants of current crops, so that the soil may aggregate quantities of progressed pabulum, as have the soils of the Miami Valley compared with those soils of Massachusetts which are barren, although having the same constituents differently conditioned.

From whence came the soils of the Miami Valley? Have they not been deposited by water courses, after having been brought from the surface of particles as fast as freed by the processes we have before enumerated? Has not every particle of this finely divided soil in turn been exposed to the atmosphere, to moisture, to carbonic acid, and to contact with every other constituent of soils, so that it has availed of all Nature's laws, chemical or otherwise, and the whole mass may now be viewed not only as a more perfect mechanical debridation of such soils as those as are barren in Massachusetts, but also as the representative of the progressed condition consequent upon all changes which natural law is capable of producing?

From what we have said, can it be difficult for any farmer to choose a method for the restoration of soils? If his means are adequate let him under-drain, thoroughly sub-soil and surface-plow to the required depths, and add fertilizing materials chosen from the more progressed sources to supply his crops, while his soil is rapidly augmenting in value. If he is located in a part of the country where the market demands nothing but special crops, then let him use less amount of fertilizing material and plow under a variety of quick growing crops, so that all the pabulum elevated from the sub-soil may be deposited in the surface-soil for future use, and continue this treatment for one or more years, until his soil is capable of raising maximum quantities of the special crops his market requires at a minimum cost; the after culture of such soil will be less expensive than that of a merely ordinary good soil, while for all time his heirs will benefit by his judicious commencement.

Farmers who have not sufficient capital for such outlay, must be content to benefit in degree, by adopting so much of the truths we have set forth, as within their means; they should first be sure to locate where the requirements of the soil are within their ability to perform all the necessary manipulations, and to supply the necessary constituents; thus a farmer without means for under-draining and subsoil plowing, cannot locate on a clay farm with profit, nor can he cultivate a more sandy soil with equal profit, with him who can avail of these appliances. He who plows a clay soil not underdrained, to the depth of only six inches, and who uses no fertilizing materials but those made upon his farm, voluntarily places himself in a position to be the slave of his store-keeper. Let those who would repudiate these doctrines, read our articles on "Underdraining" and "Subsoil Plowing," and they may learn that there are farms where drought is never felt; where meadows never run out; where blight and disease are less frequent; and that in no case where the drains are properly constructed has the investment ever proved unprofitable.—*Working Farmer.*

OVER-EATING.

How many people eat to make it even. All the butter is gone, but the bread is not quite eaten, so another piece of butter is taken; but it was too much, and the bread has given out!

How many a time has the reader eaten some remnant on his plate, not because he wanted it, but to prevent its being wasted! How often have you eaten as much as you wanted, and were about pushing back from the table, when very unexpectedly a new dish, or splendid-looking pudding, dumpling, or pie, is presented, and you immediately "set to," and before you are done, have eaten almost as much bulk as you had done before.

Many a time have you gone down to the table, not only without an appetite, but with almost a feeling of aversion to food; and yet you tasted this, and that, and the other, and before you were aware of it, you had "made out" a considerable supper!

All these practices are wasteful, hurtful and beastly—no, we recall that; we are doing Mr. Pig an injustice; for, like all other respectable animals, when he "is done," he "quits"—a thing which rational man seldom does.—*Hall's Journal of Health.*

INVERTED POSTS.

In the May number of the *Farmer* appears one of those singular productions—the fruit of imagination—that are sure as the Lake tides, (which I am informed do occur,) to find their way into the publications of the day. "Ashfield Farmer" informs us that he was induced to try the plan of inverted posts and stakes, and that he soon had occasion to inquire why the top end of stakes should rot so much quicker than the butt. There was no difference in favor of or against inverted posts. What made the difference in the stakes and none in the posts?

Now whatever the conclusions deduced by the "Ashfield Farmer" from his experience and observations, my own conclusions, after the careful observations of a long life-time, are decidedly *in favor of inverted posts.* Let me mention one fact: In 1802, my father, then a resident of Taun-

ton, Mass., having occasion to set a pair of barposts, cut a swamp white oak of proper size to split, and set one of the halves in the ground, upright, as it grew, and the other inverted. The result was as follows: Some thirty years ago, I helped my father replace the upright one with a chestnut post; which, also, some three years ago when I visited Taunton, had given place to one of cedar; while the inverted post was apparently as sound as forty years ago.

The same has also been observed of wood stacked up to season; the inverted will be well-seasoned, while the other is heavy and inclined to rot. I have examined many stakes in Iowa and Wisconsin, and have always found the inverted stakes in the soundest condition, and believe ninety-nine out of a hundred reasonable men, who will take the trouble to examine such as have been set five years or more, will become converts to the inverted system, the "Ashfield Farmer" to the contrary, notwithstanding. So thinks ZINA ROUND. *Nevada, Wis., May*, 1858.—*Wis. Farmer.*

For the New England Farmer.

ABOUT MR. MECHI'S FARMING.

BY HENRY F. FRENCH.

"Mr. Sheriff Mechi"—as he is pleased to write himself down on the title-page of his pamphlet, "How to farm profitably, particularly on heavy clays"—Mr. Sheriff Mechi has his farm of 170 acres, all underdrained with tiles, all also underlaid with iron pipes, at "Tiptree Hall," in Essex county, in the southeast part of England, about forty miles from London.

Mr. Sheriff Mechi drains his land from four to five feet deep, and then by help of a cistern of 80,000 gallons, and a steam engine, irrigates his green crops in summer, by forcing liquid manure into each field through the iron pipes, and distributing it by means of hose over the growing rye, grass, clover, beans, vetches and turnips. The sheriff is not such a blockhead as to suppose that draining and irrigation cannot be necessary on the same land. Taking out the cold water in spring, and putting on water in dry times, seems to him as consistent as it does for a man to drink in a hot summer day, though he may have got out of the river when he fell through the ice the winter before.

Mr. Sheriff Mechi raises about 40 bushels of wheat, 56 bushels of barley, and 88 bushels of oats to the acre, as he states, no doubt with truth, for average crops.

I had an introduction to Mr. Mechi, in London, last summer, and I visited Tiptree Hall, and I afterwards had the pleasure of seeing the "Sheriff of London" rolling through the city in his coach, in splendid state, with horses and footmen blazing with gold, and I had the curiosity, also, to peep into his shop, where he made his fortune by his trade of manufacturing dressing-cases and the like.

The Sheriff is "a good fellow" every way, full of life and kindly feeling, a good sheriff, no doubt, and a good farmer. He is one of the very few, who rise from low condition to be the companions of Lords and Nobles, in old England, and he has done it by having in him a good deal of what we call "go ahead."

The land at Tiptree Hall was a hard, sterile, water-logged clay, for the most part, and Mr. Mechi has brought it by "high-farming" to the height of productiveness. He says, "As a general estimate, you cannot effectually improve stiff land under £25 ($125) per acre; your drainage will cost you £6 ($30,) fallowing, levelling, subsoiling, &c., £7 ($35;) a good heavy manuring, £7; lime or chalk, £5."

Will this sort of farming pay? Mr. Mechi says it does pay him, and he enunciates this as his principle, that "*whatever does not pay in agriculture is not an improvement*," and he shows by his balance sheet, with carefully kept accounts, that his farming pays handsomely.

Will such farming pay in New England? I think it will not, at present prices of labor and produce. Produce is higher and labor much lower in England than in America, and this makes the difference which men who insist upon our copying English farming, without understanding it, overlook. Mr. Mechi's example is constantly held up for our imitation, as if it followed of course, that what is profitable there must prove so here.

Now, professing myself an advocate for "high farming" and *deep* farming, and especially for draining, which is Mr. Mechi's first commandment, I cannot see my way clear for underlaying my farm with liquid manure pipes in this cold country, where nature imposes many obstacles unknown in the south of England.

A few figures will show where Mr. Mechi would find his balance, if we substitute American prices of labor and products, instead of English prices.

On the very soil at Tiptree Hall, I inquired of laborers and of the steward the price of labor there. The answer was nine shillings ($2,25) a week for a man's labor, the laborer boarding himself. The "Encyclopædia of Agriculture" states the price in 1850, in Essex county, at from eight to ten shillings, and so confirms these statements.

Mr. Mechi states the "gross expenses, per acre, on the whole farm," to be, reduced to our currency, $38,54, of which the items of labor amount to $12,87.

Now, if we call the price of labor here 93¾ cents per day, we have it just twice and a half as much as at Tiptree Hall. Then call the labor per acre, twice and a half $12,87, which is

$32,18, and we have the difference of $19,31 to be added to his "gross expenses per acre," which will make $57,85 instead of $38,54, as the cost of bestowing the same labor here that Mr. Mechi bestows there.

Now, to show that it wont pay to spend $57,85 per acre even for such crops as Mr. Mechi produces, let us try the value in the New York market of his best crops. Wheat, barley and oats are the profitable standard crops that bring in the money in England. They are called *white* crops, and rarely are raised twice in succession on the same field. A *green* crop of turnips, clover, rye, grass or the like, usually follows a white crop, so that when we estimate the value of the wheat, barley and oat crop, we give far more than the average value of all the crops. Taking Mr. Mechi's crops as he gives them, and the prices from the New York *Tribune* of August 14, 1858, we have:

40 bushels of wheat at	$1,25	$50,00
56 bushels of barley at	65	36,40
88 bushels of oats at	50	44,00

We have seen that if Mr. Mechi paid American prices for labor, each of these crops would cost him $57,85, and if he sold them at American prices, he would soon be seen coming out of the smallest end of the horn, instead of being Lord Mayor of London, as we hope he may be in due time.

This is written, not to discourage good cultivation, but to show the folly of following English leaders in agriculture, blindfold.

Mr. Mechi includes in his expenses, tithes, church rates, rent of land, and the little items, which we have nothing to do with. We may make less or more money than he, by investing largely in improvements, but there is no parallel between us. We pay the laborer his full share of the profits, often more. In England, he gets only enough to keep him from starving. There land and its products are dear, while here both are comparatively cheap.

Good farming, intelligent farming, in both countries, will show a good balance sheet, but Mr. Sheriff Mechi's accounts need some "variation for this latitude" and longitude. We may do as well as he is doing, but not in the same way. He does not state the price he pays for labor, by the day or week, but he gives such items as this, which shows how well the laborer fares:—"Cutting drains in stiff, tile clays, 4 feet deep, at per rod or pole, including placing the pipes, 5½d." About eleven cents per rod for cutting a ditch 4 feet deep in stiff clay, and placing the drain pipes! If any laborer wants a job, at double that price, I should like to have him call on me, at the Pines. I believe draining will pay me at double such prices, but some of Mr. Mechi's improvements would soon ruin me.

There is nothing in which American farmers, especially in New England, err more than in withholding capital from their legitimate business. Judicious improvements to make the crops large and uniform, to put them beyond the common risks of wet and dry seasons, will pay better than banks and railroads. Thorough draining, deep culture, and heavy manuring, with attention to proper rotation of crops, will make farming profitable, on almost any land, near good markets.

Exeter, N. H., August 16, 1858.

NECESSITY OF PURE AIR.

Whatever makes the air impure makes the blood impurer. It is the air we breathe which purifies the blood. And as, if the water we use to wash our clothing is dirty, it is impossible to wash the clothing clean, so if the air we breathe is impure, it is impossible for it to abstract the impurities from the blood. What, then, are some of the more prominent things which render the air impure? It is the nature of still air to become impure. Running water purifies itself. Air in motion, draughts of air, are self-purifiers. Thus it is that the air of a close room becomes impure. Thus it is that close rooms bring consumption to countless thousands. Hence all rooms should be so constructed as to have a constant draught of air passing through them. A man of ordinary size renders a hogshead of air unfit for breathing, and consumes its blood-purifying qualities, every hour. Hence sleeping in close rooms, even though alone, or sitting for a very short time in a crowded vehicle, or among a large assembly, is perfectly corrupting to the blood. Close bedrooms make the graves of multitudes.—*Hall's Book on Consumption.*

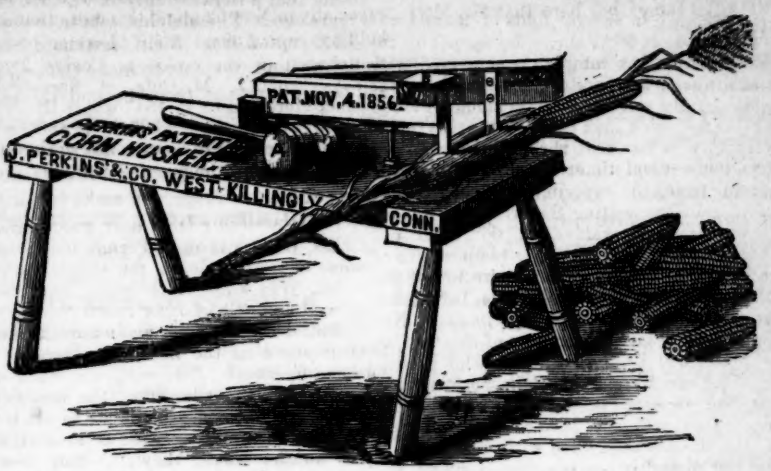
MEN AND BOYS.

There is a real distinction between these two classes of persons. They are not unlike simply as to size and strength, but also as to higher qualities. A true man is manly, a boy is naturally boyish. "When I became a man," says Paul, "I put away childish things." Some individuals, however, in the shape of men, are as little given to reflection—as indiscreet and simple, as if they wore the shape of children.

Boys are designed to be men, and men they will become, if they are properly trained and educated, and do themselves justice, but if not so trained and educated, and are reckless, they will only grow into large boys.

It is in this case much as it is with tadpoles. These are meant, naturalists tell us, to be frogs. The Creator so intended them. But if shut up and excluded from the light, they will never lose their tails and become frogs, but remain mere tadpoles.

Thus many boys never become men. They continue boys in intellect, judgment and deportment—shrunk, dwarfish and paralyzed,—inseparably allied to "childish things." "Show thyself a MAN," by eschewing whatever is puerile and belittling.—*Religious Herald.*



PERKINS' CORN HUSKER.

We have long since ceased to entertain any very strong doubts that husking corn, or any other work, may not eventually be assisted—if not entirely accomplished—by the aid of machinery. But as relates to most of the operations on the farm, we look upon that of *husking* to be among those presenting many difficulties to be overcome. There is no trouble in separating the ear from the stalk, but in most cases it leaves it with so many manipulations to be performed afterwards, that it is doubtful whether anything has yet been gained by the use of machinery in this item of farm labor.

Within the last twelve months we have looked at half a dozen different contrivances for husking, with considerable interest, but have found nothing among them all, not fairly liable to pretty serious objections.

The machine which is figured above, we have only seen in operation in a very limited degree, and cannot now, therefore, do more in presenting it to our readers than to allow its inventor to speak for himself. He says:

"This machine will husk corn of any size, on the stalk, just as cut from the ground.

The operator, seated on the machine, holds, *with the left hand*, the ear under the cutters, and with the mallet, *A*, *in the right hand*, striking the short lever, *B*, *downwards*, cuts the ear close to the first row of kernels, (the cutters being in contact or close together when they descend,) then striking the long lever, *C*, *outward*, the ear is pushed entirely out of the husk, being but two motions—first, *downward*, second, *outward*.

It husks as fast as the stalks are placed under the cutters; and from 50 to 100 per cent. more corn can be husked per day, with this machine, than by hand, and all severe and painful hand-labor entirely avoided.

The iron work is of wrought iron, and the machine is warranted not to break by fair usage.

Size of machine.—Height, 16 inches; length, 28 inches; width, 9 inches; and weight 17 lbs."

It is made by J. PERKINS & Co., West Killingly, Conn., and sold, singly, for $5,50.

For the New England Farmer.

EVAPORATION.

It has been very generally considered that the evaporation of any fluid is a cooling process—that is, that vapor always takes heat from, and consequently leaves cooler, the body which generates it; but is this so in reality? Let us examine for a moment the experiments usually cited in confirmation of this theory; the first of which is, the placing of alcohol on the hand and letting it evaporate by the natural warmth of the body. In this experiment, it is true that the hand will feel cold, but does not this prove that a certain portion of caloric has left the hand and united with the alcohol, making it in fact *warmer*, instead of colder? The second experiment cited is that of the Spanish alcarrazas, which consists in placing water in a porous earthen jar, either in the sun or in a warm, dry atmosphere, where evaporation will take place with great rapidity? By this means water, it is said, may be cooled to quite a low degree of temperature. I am not prepared now to say that this may not be so, but yet it is a question of some doubt, as the reader will see, by attention to the result of the following experiment, which was performed a short time since by

Mr. J. H. Shedd, of this city, for the express purpose of testing the accuracy of commonly received opinion upon this subject.

A jar wrapped in several folds of flannel was filled with water at 66° Fahr.—the flannel on the outside of the jar was completely saturated with water at the same temperature and the whole was then placed in the sun when the themometer stood at 126°; evaporation took place with great rapidity, so rapidly in fact that the wrapper required to be re-wet several times in the course of the hour during which the experiment was continued; the water used for wetting the wrappers was always of the same temperature, viz., 66°, and could have had no effect in raising the temperature of the water in the jar; yet at the expiration of the hour its temperature was 81°—that is, 15° higher than at the beginning of the experiment! Not doubting in the least the accuracy of this trial, as it was performed by a gentleman who is well known to be careful and exact in performance, the trial was repeated in the following manner. One end of an ordinary porous drain tile was closed, and the tile then filled with water at 71°; this was not placed in the sun, but in such a position that it was constantly subjected to a draught of air at a temperature of 72½°: the water soon saturated the porous sides of the tile, and evaporation took place so fast that in the course of three hours a tenth part had been vaporized; yet the only change that had taken place in the temperature of the water had been to raise it, in the beginning of the experiment, 1½°, that is, to 72½°, the temperature of the atmosphere; having gained this point, it remained constant throughout the entire time of the trial.

It is possible that in making these experiments something essential to their successful operation may have been omitted; if so, it is hoped that some one of the many intelligent readers of the *Farmer* may correct our errors, and at the same time throw more light upon this portion of the theory of evaporation.

Though evaporation, *per se*, may not be a cooling process, yet no one can doubt that through this medium wonderful changes of temperature are effected; and still more wonderful and even fatal changes are prevented.

In the whole economy of nature there is no more beautiful phenomenon than this;—annually the earth in its mighty respiration sends forth and draws back to itself one hundred and sixty millions cubic miles of vapor. To this flow of the earth's breath of life we owe our majestic rivers and ever flowing springs; the beauty of the sunset filling the heart with calm, quiet joy, the vanishing tints of the rainbow, ever reminding us of God's saving promise, are but the fulfilling of its mission to men. PENSA.

Boston, Aug., 1858.

THE HEAVIEST BULLOCK EVER BUTCHERED.—Upon the authority of the President of the American Institute, it was recently stated that the heaviest bullock butchered in this country was the ox Washington, whose gross weight was 3,204 pounds, and weight of beef 2,174 pounds. This claim appears to be disputed, however, by some writers in the *Tribune*, from Pennsylvania, one of whom claims that a bullock was butchered near Lancaster, on the 22nd of February last, whose live weight was 3,387, net, 2,409; the other that a Berks county ox was butchered some years ago in Philadelphia, whose live weight was 3,350, net 2,388. A still heavier bullock is announced in the *Saratoga County Press*, which says "that J. M. Cole, of Saratoga Springs, slaughtered an ox in 1847 whose live weight was 3,520 lbs.; dressed 2,567." If this be true, Mr. Cole has probably beaten the world, and should give the world the proof.—*Southern Planter.*

INQUIRIES ABOUT WHITE CATTLE.

ED. CULTIVATOR:—Permit me to ask you or some of your readers a few simple questions:

1st. Will white cattle stand our cold winters as well as cattle of other colors?

2nd. Does the color make any difference about their standing the heat, when worked hard in warm weather?

3d. Does the color affect the quality of beef?

4th. Would it not be better to bring our cattle from the north as much as possible, than from the south; would they not stand our winters better?

I would like to have these questions answered, as I am rather partial to white cattle, and I would like to know whether they are as hardy as cattle of other colors? Yours truly, H. C. B.

ANSWER.—More than thirty years ago we worked a yoke of white oxen through a heavy season's plowing, and though, in the abstract, they stood heat better than dark cattle, yet their general tenderness led us to turn them to beef as soon as possible. Our experience with white cows is also unfavorable to their profitableness. But these were not the blood stock. We shall be glad to have the experience of those who have kept the white full blood short horns.—*Ohio Cultivator.*

POWER OF ABSORPTION.

It is a fact well known to physiologists that the power of absorption of nutritious matters depends upon the fact that the blood in the capillary vessels which surround the intestines is thicker than the fluid contained in the intestines. Water is absorbed in great quantity and rapidity into the blood from the intestinal canal. The blood would thus soon become so diluted as to be incapable of further absorption, if it were not for certain arrangements for the rapid escape of this water from the body. A part of the water passes off by the kidneys. Thus, if a man drinks five or six tumblers full of ordinary well or spring water, the major part will be excreted by the kidneys in less than thirty minutes. But, besides this, the evaporating surface, including the cutaneous and respiratory, is immensely large as compared with the absorbing surface. According to Lindenau's calculation, the whole absorbing surface of the intestine is 24 square feet, while the evaporating surface of the lungs is 2,642 square feet and that of the skin is 12 square feet. By this wonderful contrivance any undue increase of water in the blood is soon got rid of, and the due thickness of the blood, and of consequence its powers of absorption, are constantly maintained. —*Louisville Journal.*

For the New England Farmer.

A FINE FIELD OF POTATOES—DIGGING AND PILING MUCK.

MR. BROWN:—*Dear Sir,*—I have been much interested to-day in viewing a field of ten acres of potatoes. All things considered, the field is a sight worthy the observation of any man at all interested in the cultivation of land, and I think may well receive a passing notice in the *Farmer.*

The land is part of a tract of upland pasture, heretofore closely fed by village cows, and in ordinary condition. The soil is a yellow loam, somewhat mixed with cobble stones in places, but for the most part tolerably free, and easy to work. Early in April last, the land was plowed, harrowed, and furrowed out one way, in rows three and a half feet apart. Then it was manured in the hills, with a compost of muck and ashes,—using, in all, an hundred loads of compost, putting a shovelfull in each hill. The hills were made three feet apart in the rows. The potatoes were dropped immediately upon the compost, and the planting done between the fifteenth and twentieth of April.

The muck was dug from the swanp two years ago this summer, and placed in a heap on dry ground, to dry and become rotten and fine. A week or two previous to planting, it was drawn upon the field and placed in four heaps, of twenty-five loads each, at convenient distances for reloading and dropping into the hills; and three bushels of unleached ashes were mixed with each cart-load of the muck, as it was being deposited in the heaps. After lying a few days, the compost was shovelled over, and then it was ready for use.

The potatoes have from the first been very thrifty and of stout growth. The tops now stand about three feet high, and spread out laterally so as to touch from row to row and pretty much cover the ground; and they have a deep green color and perfectly healthy appearance every way. The potatoes are already of good size for cooking, and promise a good yield,—indeed, they are now daily prepared for the table. Any one, observing the perfect and large growth of the crop, and considering the previous condition of the land, must conclude that the compost of muck and ashes is a valuable manure. My observations to-day so forcibly remind me of the value of muck, that I can not forbear again urging its preparation for tillage purposes, notwithstanding that I have heretofore in the *Farmer* said so much upon the subject.

August and September are generally the most favorable months for digging muck. Now then is the time to get it out of the swamp and pile it upon dry ground, in heaps accessible at all seasons. It is always a convenience to have such a deposit of vegetable matter to draw from, there are so many ways in which the muck can be used in the making of manure and cultivation of crops.

The older the muck before using it, the more marked its good effects upon the crops. By lying a year or two in a heap upon dry ground, the muck becomes dry, rotten and finely pulverized; the action of sun, frost and decomposition in a good degree takes out the acids; the muck is lighter and freer to shovel, cart, and handle any way; it will be a more perfect absorbent of the liquids and salts of manure; and may be used in larger quantities, in proportion to the manure, lime or ashes it is composted with, than would be proper or profitable if it were taken directly from the swamp, in a green, raw state. Therefore, if one can let his muck lie in heap two years before using, it will be enough better to richly pay the investment; and it certainly ought to lie several months, at least.

If the swamp is not dry enough to get the muck out handily, now is the favorable period for opening ditches to drain it. If it is inconvenient or undesirable to drain the entire muck-bed, then by ditching around a piece of it, of a few rods square, and extending an outlet ditch, of suitable depth, to ground low enough to carry off the water cleanly, the body of muck so separated on all sides from the main bed, will in a very few days drain off sufficiently to be easily shovelled up and carted out to dry ground. Where one designs to get out a considerable quantity of muck, he will find it to be in the end the best economy to drain at least that portion of the swamp he is to take the muck from, clear to the bottom. A more temporary and superficial arrangement will not generally be any saving of labor. F. HOLBROOK.

Brattleboro', Aug. 17, 1858.

TIMES GO BY TURNS.

An English Jesuit, Robert Southwell, wrote the following lines of much merit, two centuries and a half ago. The philosophic strain pervading the piece is worthy of admiration.

The lopped tree in time may grow again,
Most naked plants renew both fruit and flower;
The sorriest wight may find relief from pain,
The dryest soil suck in some moistening shower.
Times go by turns, and chances change by course,
From foul to fair, from better hap to worse.

The sea of fortune doth forever flow,
She draws her favors to the lowest ebb;
Her tides have equal times to come and go,
Her loom doth weave the fine and coarsest web.
No joy so great but runneth to an end,
No hap so hard but may in time amend.

Not always fall of leaf, nor even spring;
No endless night, nor yet eternal day;
The saddest birds a season find to sing,
The roughest storm a calm may soon allay.
Thus with succeeding turns God tempereth all,
That man may hope to rise, yet fear to fall.

A chance may win that by mischance was lost;
That net that holds no great, takes little fish;
In some things all, in all things none are crossed;
Few all they need; but none have all they wish.
Unmingled joys here to no man befall:
Who least, have some; who most, hath never all.

TREES.—I remember that, riding one day in the south of Spain, where plains and hillsides have been thoroughly denuded of trees,—except the poor, homely, shadeless olive,—my intelligent guide pointed to a huge ring, or bolt, in the side of a rock, as our horses were picking their way through the dry, rocky course of a once deep river. "There," said he, "the old Romans used to make fast their galleys when they ascended this river."

The forests have now gone, and with them this once navigable river, which flows only in the winter, and there is but a shallow stream. —*L. Saltanstall.*

ROTATION OF CROPS.

Manuring has been aptly denominated the moving power in agricultural enterprises—the steam engine which propels the vessel,—and if so, a proper and judicious succession or rotation of crops may be considered the rudder which guides or directs its course.

We have not, in this country, any general or common system of rotation, and have as yet made but a remote approximation to the accuracy which characterizes the movements of agriculture in Great Britain, Germany, and many other European countries, where the art of agriculture has been longer practised, and where its laws are better defined and understood.

The courses which have been most generally introduced, are the following:—

I. 1st year, corn and roots well manured; 2d year, wheat sown with clover, 15 lbs. per acre; 3d year, clover one or more years, according to the fertility and amount of manure at hand.

II. 1st year, corn and roots with all the manure; 2d year, barley and peas; 3d year, wheat sown with clover; 4th year, clover, one or more years.

III. 1st year, corn and roots with all the manure; 2d year, barley; 3d year, wheat sown with clover; 4th year, pasture; 5th year, meadow; 6th year, fallow; 7th year, wheat; 8th year, oats sown with clover; 9th year, pasture or meadow.

It will be noticed that in each of these three courses, the number of fields corresponds with the number of changes—the first is three, the second four, and the third nine. As to the practicability of rendering a thorough and complete course of rotation economical at first, on our farms, there may be some question; yet that the system is philosophically predicated, and susceptible of successful adoption, under favorable circumstances, is quite probable. A principal objection will be found as existing in the extra extent of fencing required in subdividing the farm properly.

Another objection would be found by us in *the year of rest* which the soil finds in the nine-course system; that is, leaving the fields *fallow*, or in furrow, and perhaps, plowed two or three times in the course of the year, when it recuperates, not only by not being cropped, but being mellow and porous, draws largely from the enriching influences of the atmosphere, and is thus enriched for future cultivation. In fallowing, therefore, a considerable portion of the labor required for a crop must be performed without any present return whatever.

The soundness of this practice is generally questioned in this country, but probably upon no better data than vague supposition; as we have never known of a single experiment as a test, nor seen one related. The English people have brought the art of cultivating the earth too near to a system, and are too critical and observing, to continue a practice of this kind through a long series of years, unless it were based on some sound principles of utility.

We hope some of our farmers, such as Mr. Fay, of Lynn, Brown, of Marblehead, Waters, of Beverly, Sutton or Ayres, of Salem, and many others who have extensive farms, will make careful experiments on this point, and let the result be known.

One thing with us is certain, and is acknowledged by all, and that is, *that we occupy too much land*—that the same manure now used, spread on a less quantity of land, would produce far more favorable results,—and when we feel that we cannot spare the land for the year of *fallows*, or *rest*, we must remember that the English people occupy less land and manure much higher than we do, and therefore, can better afford to let a portion of their soil rest.

For the New England Farmer.

CULTIVATION OF WINTER WHEAT.

Mr. Brown:—*Dear Sir*,—Happening a day or two since to meet my townsman, Rufus Clark, Esq., he remarked to me that he had been interested in the several articles in the *Farmer*, by your able correspondent, Mr. Poor, upon the subject of raising winter wheat in New England; that, in consequence of Mr. Poor's suggestions, he in the fall of 1857 sowed an acre and a half with winter wheat; and having succeeded in raising a good crop, he would like to show it to me. I therefore called at Mr. Clark's place to-day, to see his wheat, and gather the details of its cultivation. I present the results to the *Farmer*.

The land that produced the wheat is of about an average quality with the rest of Mr. Clark's tillage land, and has had no extra cultivation above his other fields. In 1854 it was manured broadcast and planted with corn, and that Fall sowed with winter rye, and stocked the following Spring with clover and herdsgrass. In 1855 the acre and a half yielded twenty-one bushels of winter rye. In 1856 and 1857 the piece was in mowing, yielding good crops of mostly clover hay.

The first week in September, 1857, the acre and a half was plowed up, and manured with a compost made of muck and leached ashes, spreading it on top, about at the rate of fifteen ox cart loads to the acre, and harrowing it in with the wheat. The muck used had lain one year in a heap in the barn-yard. Just before applying it to the wheat land, about four bushels of leached ashes were mixed with each load of muck. On the 12th of September two and a half bushels of winter wheat were sown on the acre and a half; and early this Spring it was stocked with grass seeds.

The first week in July last, the grain was cut and stooked, and made sixty stooks, of twelve

bundles to the stook. The heads of wheat are of good length, and the berry plump and fair, with no injury from insects of any kind. The straw stood about breast high, perfectly bright and free from rust or blast.

I have examined the crop in the barn, both threshed and not threshed, and am pleased with its appearance. A small portion has been threshed, and it would seem, judging from the grain obtained from a given number of bundles, and considering the whole number in the sixty stooks, that the yield would be between fifteen and twenty bushels to the acre. There is no reason to doubt but what more bushels of winter wheat have been grown on the piece this year than it yielded of winter rye three years ago. It is proper to remark that there was a good catch of grass with the wheat.

Now this is not an extraordinary crop, which other farmers could not hope to equal. But it is a good crop, of winter wheat too, and encouraging to others to try and do likewise. Mr. Clark's crop goes to confirm the correctness of Mr. Poor's advice to New England farmers, to attempt the raising of winter wheat. F. HOLBROOK.

Brattleboro', Aug. 20, 1858.

APPLE PUMICE.

The general presumption is, among farmers, that *apple pumice* is an article utterly worthless. This, however, is a mistake. If, upon cutting down the cheese, the pumice be thrown into a close, compact heap, with a sufficiency of quick lime to neutralize the acidity of the mass, and allowed there to remain undisturbed until the following autumn, and then be shovelled over and mixed with a fresh supply of lime, or unleached wood-ashes, old manure, compost, or dry meadow mud, it will soon become one of the most salutary applications that can be made to apple trees, grape vines, or, indeed, to almost any species of fruitiferous trees or shrubs.

In its crude state the superabundance of acid which it contains, *(tartaric,)* renders it highly injurious, and not unfrequently fatal in its effects when applied to vegetables of almost every kind. A knowledge of this fact sometimes induces the spreading of fresh pumice around bushes which it is desirable to destroy, and the result is speedily secured. Elder bushes are often completely deadened down to dry wood, in a single season, by having the surface of the soil around their roots covered with a stratum of pumice four or five inches in depth. Bushes which are even more tenacious of life than the elder, rarely survive more than a year after the application is made. But it is more valuable as a manurial agent, and to this use should be appropriated.

In districts where lime cannot be easily obtained, a good process is to deposit the pumice in some low and convenient place, where it will not be liable to wash away, mix with it what wood-ashes is at hand, and then five or six times the amount of pumice, of old, well-dried meadow muck. Turn the mass over two or three times a year, and thoroughly incorporate the whole. Six months before using, cart to the heap a few loads of manure from the barn, mix it minutely, and the heap will be ready for use.

For the New England Farmer.

THE TRUE FOWL-MEADOW GRASS.

MESSRS. EDITORS:—The July number of your very valuable journal contains answers to questions proposed by me to the *N. E. Farmer*, no longer ago than May 28th, 1827. And as I was not expecting *just now*, to receive an answer, and having a press of business on my hands, (the *Monthly N. E. Farmer* being *always good for use*,) I did not notice the fact until this morning. My special acknowledgments are due, and are rendered to Mr. Wetherell, for his very interesting and instructive article, upon a subject of so much importance to farmers in general.

The lamented FESSENDEN, of the old series of the *Farmer*, was deeply interested in regard to this grass, (the *Poa nervata*,) and says, in closing his article upon the subject in Vol. 5, No. 45, June 1st, 1827, "We are not able to state the quantity of seed to the acre which should be sown for a crop of fowl-meadow, nor to give satisfactory answers to the other questions of Mr. Macomber, but would consider it as a great favor, if any person acquainted with the cultivation of this valuable kind of grass will answer his inquiries." But it so happens that by far the most satisfactory portions of Mr. Wetherell's article are, after all, contained in the use of the same quotations, from Dr. Elliot's third essay on field husbandry, and from Dr. Willich's *Domestic Encyclopædia*, and also from Dr. Muhlenberg; which appeared in Mr. Fessenden's remarks on the same subject more than thirty years ago.

Upon carefully reviewing Mr. Fessenden's remarks, we think Mr. W. will become convinced that Mr. F. did not say, as he supposed him to do, that, "this grass is called herds-grass, and white-top, at the South." But says Mr. F, "It is thus described in the second volume of the American edition of Willich's *Domestic Encyclopædia*, page 268;" and we do not understand Mr. Fessenden to affirm it to be so, any more than we do Mr. W. to affirm that which he quotes from others.

That Mr. F. was mistaken in some respects there can be no doubt; he answered according to his best information in '27, and Mr. W. has given us in some respects the same, together with the increasing light of '58; and the agricultural community can but be grateful that a grass of so many valuable qualities, is now so authoritatively and elaborately, as seen by the many writers cited by Mr. Wetherell, placed within their rightful power.

Mr. W.'s answer to my third question does not appear to have been understood, he having once for all said in answer, "it is not a salt marsh grass;" *that* we well knew from Mr. Fessenden's remarks, in '27. But will it answer provided *the soil is sometimes overflowed* by salt water? in the *exact language* of the question, is *quite another matter*.

Does Mr. W. know, that upon our rivers, situated somewhat remotely from the sea, we have large quantities of meadow, producing at the present valuable grass, known with us as blue, and black grass, mixed in with some of the English grasses, and that those marshes are *sometimes overflowed*, by means of salt water, which in meeting the flowing tide from the sea, is met itself by the fresh water from our inland river sources, and is of course thereby made brackish; but not so salt, as to prevent the growth of fresh grass? Very many acres of this kind of marsh exist upon all our sea-coast towns, which might be very much more productive of quantity, and very greatly improved in many other particulars, could the fowl-meadow grass take the place of very much, at least, of that which now covers it. It was to meet *this* view of the case, that the question was originally asked, and would still doubtless be of considerable service to quite a large interest, to be informed, on a subject of so much importance to them.

With many of us, surely, it is a matter of no trifling consequence to have a grass like this, which is said to produce its three or four tons to the acre; and at the same time, in case of sickness, want of help, or any other unforeseen event, be able to delay cutting it, even until October, without injury to the hay. CHAS. W. MACOMBER.

East Marshfield, July 24, 1858.

RAREY ON "BLINKERS."

Mr. Rary sends to the London *Times* his opinion of the use of "blinkers" on horses, as follows:

"All my experience with and observation of horses proves clearly to me that blinkers should not be used, and that the sight of the horse, for many reasons, should not be interfered with in any way. Horses are only fearful of objects which they do not understand or are not familiar with, and the eye is one of the principal mediums by which this understanding and this familiarity are brought about.

The horse, on account of his very amiable nature, can be made in the course of time to bear almost anything in any shape, but there is a quicker process of reaching his intelligence than that of wearing it into him through his skin and bones: and he, however wild or nervous, can be taught in a very short time to understand and not to fear any object, however frightful in appearance. Horses can be broken in less time and better without blinkers; but horses that have always worn them will notice the sudden change, and must be treated carefully the first drive. After that they will drive better without the blinkers than with.

I have proved by my own experiments that a horse broken without blinkers can be driven past any omnibus, cab or carriage, on a parallel line, as close as it is possible for him to go, without ever wavering or showing any disposition to dodge. I have not, in the last eight or ten years, constantly handling horses both wild and nervous, ever put blinkers on any of them, and in no case have I ever had one that was afraid of the carriage he drew behind him or of those he passed in the streets.

The horse's eye is the life and beauty of the animal as well as the index of all his emotions. It tells the driver, in the most impressive characters, what the horse's feelings are. By it he can tell the first approach of fear in time to meet any difficulty; he can tell if he is happy or sad, hungry or weary. The horse, too, when permitted to see, uses his eyes with great judgment. He sees better than we do. He can measure distances with his eyes better than we can, and, if allowed free use of them, would often save himself by the quickness of his sight from collisions when the driver would fail to do so by a timely pull of the reins. It would also save many accidents to pedestrians in the streets, as no horse will run on to any person that he can see."

For the New England Farmer.

CANADA WEST.

THE SEASON, PROSPECTS, ETC.

To many who are unacquainted with this country, its name is associated with the idea of a cold, ungenial climate, scarcely habitable by enlightened people. But a few minutes spent in examining a good map would teach them that almost the whole of Canada West lies between the parallels of 42° and 45° of north latitude. One-half of the State of Maine is farther north than Canada West, and the south-western portion of the Province is farther south than Boston; consequently it is in the same latitude as the greater part of New England, and we may reasonably imagine a similarity in climate. By several years' careful observation I find it to be so, only that near the great Lakes we have less snow, and more changeable weather in winter.

The soil is generally fertile and easy to cultivate, producing abundant crops. Wheat is the great staple, though in some sections that grain does not succeed so well as formerly. This is particularly the case in this county (Prince Edward) but great quantities of rye, peas, and barley are raised. Corn grows well, but as it requires more labor than grain, the quantity raised is small.

Although the price of grain is low, owing to our great distance from a good market, farms here sell from $30 to $50 an acre, according to quality and location, and for a much higher price in places farther west.

Spring opened early this year, and we have had some very fine weather, though subject to changes. The 9th of May the mercury rose to 70° in the shade, and in the morning of the 16th it fell to 34°. Some plowing was done the 3d month; the 4th month was milder—mean temperature in the shade 43.53°, which is 6° above that of the corresponding month last year.

We have had an abundance of rain, and grass looks fine. Vegetation of all kinds progresses steadily. Forests have assumed quite a vernal hue, and the fields have spread their green carpet. Wild flowers are abundant, and many a vase is crowned with a bouquet of these emblems of innocence and purity. The 18th of 4th month I found some flowers of the Bloodroot, (*Sanguinaria Canadensis,*) Liverwort, (*Hepatica Triloba,*) and of the beautiful Yellow Erythronium, (*Erythronium Americanum,*) which, with its lily-shaped flower, and clouded leaves, is among the earliest harbingers of spring, and is found in

New England as well as here, growing in rich earth beside fences, or in thin woods.

The prospect for crops is good, yet, owing to the open winter, considerable grain is winter-killed, especially on flat land. All kinds of fruit trees will bloom well, and this was the case last year, but apples were scarce. Considerable attention is paid to raising fruit, but old orchards are much neglected. A good supply of small fruit is raised here, though grapes are not so plenty as is desirable. I should be glad to try the Concord grape, if I could obtain a root; I do not know of one in this region. L. VARNEY.

Pictou, C. W., 5th Mo., 18th, 1858.

REMARKS.—We regret that this communication, with one or two others which we shall publish, was mislaid. We are always glad to hear from friend Varney, and shall be more careful with his next letter.

For the New England Farmer.

THE OAKES COW.

MR. EDITOR:—I have copied for your monthly journal a letter from the venerable JOSIAH QUINCY, which I accidentally found among my papers, to-day. The notoriety of the object about which he wrote, as well as the eminence of the writer, will secure the attention of many a gratified reader. In these days when objects of fancy are leading astray our judgments, let us be careful *not to rub out old land-marks*. If my recollection is right, in the volume of Agriculture for Massachusetts, as compiled by Mr. Secretary Flint, for 1854, page 280, will be found a portrait of this celebrated animal. I also think he said Col. Jaques, of Somerville, last owned her. If any doubt remains on these points, fortunately for the community, Messrs. Quincy and Jaques, both "still live"—although verging close on 90 years. Very truly yours,

May 11th, 1858. J. W. PROCTOR.

[COPY.]

SIR:—The subject of the Oakes Cow has been out of my mind for at least *thirty-five years*. I bought her for my farm use, (in 1816, I believe;) her milk produce was satisfactory to my farmer, but neither her milk nor her butter were kept distinct from what my other cows produced. I regarded her as a very good cow, which by high feeding, and special attention, might be made to produce an extraordinary quantity of milk. I raised no calves from her, and had no knowledge of her origin, and have no recollection what became of her. Yours respectfully,

JOSIAH QUINCY.

NOTE.—In the 4th volume of Agriculture of Massachusetts, is a specification of the product of the Oakes cow, viz.:—484½ pounds of butter in one season, besides one quart of milk a day for the use of the family.

AGITATING PLANTS.—It is a remarkable fact, according to "the chemistry of the world," that trees which are regularly shaken every day in the green-house grow more rapidly and are stronger than others which are kept unagitated. —*Hogan.*

For the New England Farmer.

THE CURCULIO—WARTS ON PLUM TREES—PEAR BLIGHT.

MR. EDITOR:—I have noticed, within a few years, that much has been published in your paper and others, about the wart on plum trees, and the curculio, or plum weevil. The wart still continues to rage, and the trees are fast giving place to other trees of more sure growth and fruitfulness. To all human appearance, that beautiful fruit, the plum, is likely to become extinct.

I commenced cultivating the plum about 15 years ago. I believe then the curculio and the wart were but very little known in this country. My trees grew smooth and handsome, and I had plums in abundance, for a few years. Then came the curculio, apparently few in number, stinging the fruit, and depositing its egg, which caused the fruit to fall prematurely, and they have every year increased. Then came the wart, which was increased with the increase of the curculio. After much effort to discover the cause of the wart, I have come to the conclusion that it is caused by the curculio, and if we can destroy that insect we shall again have smooth trees and plenty of fruit.

I have been troubled very much with what some call *sap-blight* on the pear tree; mostly confined to the trunk of the tree, but recently, that or some other blight has commenced at the top of some of my best trees. I first discovered it by seeing the leaves turned black and the fruit withered up. I have taken off several tops, down some four feet. I wish to inquire if this is something new, for it has never been so with my trees before? PETER WAIT.

Danvers, August, 1858.

REMARKS.—The blight spoken of is no stranger to pear raisers. It is a disease, or difficulty not yet provided with a remedy.

HOOFS OF YOUNG HORSES.—We saw recently an instance of the ill effects resulting from the neglect to shorten the excessively long hoofs of young horses. A colt, with unusually long hoofs, had, in his play, stepped upon some hard substance, and broken off the hoof of one foot to the quick. The accident was attended with some bleeding and excessive lameness, the poor fellow being unwilling to put his foot to the ground. Ten minutes' work would have saved the animal much pain, and the owner might have had the profit of three months' growth, instead of having it arrested for that period.

But the occasional breaking off of a part of the hoof is but a trifle when compared with other mischiefs resulting from the same cause. When the toe is too long the strain on the fetlock-joint is greatly increased, and permanent injury to the suspensiry ligament of the foot often follows. Young horses frequently have windgalls, and other evidences of sprains, before they are put to work, and in ninety-nine cases out of a hundred these are where shortening of the toe has been neglected. On some gravelly and stony land and hard roads the hoofs will wear fast enough as

Nature evidently intended they should; but if horses are kept on smooth turf their feet must be kept short by artificial means.—*Ohio Farmer.*

For the New England Farmer.

FALL TRANSPLANTING.

Mr. Simon Brown:—This spring I became aware that I had lost about seven-eighths of my asparagus by *transplanting last fall:* it was originally planted too deep, and I wanted to change the location of the bed; so I had it all taken up and planted in a bed well manured, but not salted enough to prevent weeds from starting abundantly this spring. Hoping it might grow—though late—I put off setting new roots till July, (I was told by an honest Quaker who grows it largely, that he had transplanted it with success, as late as 6th mo.,) when, on removing the earth for planting, I found the skeletons of the roots of the old plants. Last fall was a warm one, and I suppose the manure was not only decomposed itself, but caused the roots to, also, as they were comparatively in a dormant state.

Heretofore I have transplanted in the spring and have been very successful; but last season I was induced to try the fall, not only for my asparagus, but for two shell-bark hickory, from a nursery, and two pear trees, two Hartford prolific grape vines, and some raspberry roots. Of the trees, though the bark (not the buds) is still green, only one has started to grow; and that not till after the 1st of July. One grape vine did not start at all, the other did feebly in the spring but is now doing pretty well. The raspberry roots are most all dead.

This ill success can not be attributed to improper management in planting, for I was careful not to let the manure come in immediate contact with the roots at the planting; and I procured 29 of the grape vines for 23 different persons—friends and neighbors—the vines and trees came with good roots, and from all I can learn, the stems looked fresh and promising during the winter; but I find, on inquiry, only about 6 living. The report from almost every one I ask being—they are dead and dried up. These were received the 9th of November, and mine were planted immediately. In justice to *fall transplanting* I ought to state that of two Clinton and one Dracut grape vines, three apple, six peach and one plum trees, planted at another time, though in the same month, all lived but the plum, and though some of the peach trees started very late, all are now doing well.

Very truly yours, O.

Worcester County, Aug. 3, 1858.

FENCE POSTS.

The durability of fence posts, it has been ascertained by reiterated experiments, is greatly increased by charring the bottoms, or that portion of them which is to be inserted in the soil, before setting them. There are but few methods, probably, of enhancing the durability of wood which is to be exposed to the action of moisture, or the soil, more effectual than that of charring. In old fields, the plow not unfrequently exhumes knots, and fragments of limbs which must have remained beneath the surface for several generations, yet in a perfectly sound condition in consequence of the exterior surface having been charred when the clearing of the soil was effected by "axe and brand." Oak and cedar posts, as well as stakes of all kinds, endure nearly twice as long when so prepared, and as the cost is, in most cases, merely nominal, the practice should universally prevail. It is well known that on many kinds of soil, the most valuable and durable kinds of wood will last but a few years if set in an unprepared state, and the cost of repairs is often one of the most serious drawbacks with which the farmer has to contend. We advise every one, therefore, who is about to erect new lines of fence, or to repair old ones, to make trial of this plan by all means, and to carefully observe the result.

EXTRACTS AND REPLIES.

WINTER WHEAT.

Having noticed a communication from Mr. Poor in your issue of the 7th inst., upon the subject of raising winter wheat, will you give such information as you may be able to respecting it? What soil is best adapted to it? What is the rule for making pickle? the quantity of seed per acre, and the price per bushel? Do you know anything of the banner wheat? W. Ellis.

Medway, Rockville, Aug. 9, 1858.

Remarks.—Any land that will produce three good crops of English hay in succession, after being tolerably well manured when it was laid down, will produce wheat. Moist, but not wet, gravelly or sandy loams are suitable, or clay loams if they are drained. Pine plain lands are not suitable.

No exact rule is necessary in making the pickle in which to soak the seed. If the water takes up as much salt as it will, it will not injure the grain. Soak it twelve hours.

From one bushel to a bushel and a half of seed is required per acre. Rich land requires *less* seed than poor land.

The *Banner* wheat is probably not a variety, but has only received a local name.

GREEN CUCUMBERS.

At the breakfast table this morning we had a discussion with regard to eating cucumbers. My opponents were willing to admit that all vegetables were more wholesome when ripe than when green, except cucumbers, and they were best green, from the fact they have always been used at that time. And now we want your opinion, or some other scientific man's on this subject.

Milford, N. H., 1858. Dyeo.

Remarks.—We never eat them, green or yellow, and do not feel competent to enlighten you on the subject—but leave it to some who have

been *killed* by eating them to reply. We confess, however, to their attractiveness both in taste and smell, and sometimes almost wish for an ostrich's gizzard with which to digest them.

—

GREEN CORN AS FODDER.

The great drawback in raising corn fodder for winter feed, is the great difficulty there is to get it sufficiently dry for storing, and if your readers would give their experience in the matter, it might prove advantageous to many. My own course has been to cut it just before frost, and bind in small bundles, (after allowing it to wilt through the day) and put it in large stacks, say from 12 to 20 bundles in each, and well set up with two bands, and the top turned over, and allow it to stand thus, keeping watch that none of it gets out of place until about the middle of November, or just before winter sets in. It never hurts in the stack out of doors as long as it is kept in good shape.

But the great trouble is, that after being housed and put in masses, it is so liable to heat as to render it almost impossible to keep it in good condition, unless you have a surplus of room to spread it, on scaffolds or places where the atmosphere has free access to it.

Please, Messrs. Editors, give us your views.

WM. J. PETTEE.

Salisbury, Conn., Aug. 10, 1858.

REMARKS.—The cultivation of southern corn, either to be used green or dried for fodder, has become quite common. Not only in the more thickly-settled towns is it cultivated, but we have observed it in the country where there is extensive and rich pasturage. It is found to be profitable, or the practice would be abandoned. Some persons cut it, spread it thinly upon the ground for a day or two, and then tie it in small bundles and put astride walls, fences, or poles put up for the purpose. We have never been satisfied that it is a profitable crop for dried fodder—better sow oats or millet. Will those having experience come to Mr. Pettee's help?

—

CAPONIZING AND SPAYING.

Will you please inform me of the best book on gardening and horticulture, or at least the one which would be the most suitable for a person having three or four acres of land near a good market?

Can you or any of your readers inform me of the process of forming a *capon?* I have read of those who treated fowls in this manner with apparent advantage.

What is your opinion of spaying cows? Is there any one in New England that performs the operation? P. P. M.

Lowell, Aug. 9, 1858.

REMARKS.—Purchase the *American Farmer's Encyclopædia*, and you can learn all about caponizing. Dr. JOSEPH REYNOLDS, of Concord, Mass., has performed the operation of spaying with complete success.

ACCIDENTS TO COLTS.

I recently noticed in the *Farmer* an account of a colt being injured by running in the pasture. Having a desire to do good if I can, I make a statement of a similar case. I had last winter two colts standing in an old barn together, one by the side of the barn, and the other next to him, the one hurt coming two years of age. I went in between the two one night with a lantern; and as my eye caught sight of the gambrel joint of the one standing next to the side of the barn, I put my hand over it and found it was much swollen; in front, and on the outside of the leg, where the skin meets between the joint and gambrel cord, there was a soft, puffy bunch, as big as a small hen's egg, and one on the inside not so large. I could not determine for some days how it was done; but as I was rubbing the leg I noticed some marks on the boarding, and examining it, I found that the boarding and shingling were started from the sill and post—the bottom or outside of the sill being some rotten. I found hair on the post, between the post and boarding, which convinced me that the leg was hurt by lying down and getting it between the posts and boarding.

I rubbed the joint with beef brine for some days, but thinking that it needed something more powerful, began to rub it two or three times a day with the oil of Origanum, mixed with alcohol, equal parts. Continuing this for some time, I thought it would cure it, as the bunch grew smaller, but I found after some time, that the bunch grew larger. I then took some of the oil and a little of the alcohol, and rubbed it hard with it for some time—the hair and skin came off, but the leg was cured by it, and there is no bunch on it now. I think our friend need not have a spavined colt if he attends to it closely.

Weston, Mass., Aug. 10. G. W. D.

—

BLOODY MILK.

I have a cow, that has her second calf, a fortnight old, that gives bloody milk. There is no appearance of garget and no swelling. Will you tell me through the columns of the *Farmer* the probable cause, and the remedy, if such there be.

Sherborn, Aug., 1858. M.

REMARKS.—We will pay you *one hundred dollars*, cash in hand, if you will tell us *what the cause is of this class of diseases in cows, and the way to prevent it*, and we can make more money out of the recipe, than all the milk *producers* in Massachusetts make out of their business, at the present prices of milk.

Give her three or four doses of *Aconite*, in as many days—four drops at a dose.

—

REMEDY FOR POISON.

In a recent *Farmer*, N. M., of Atkinson, N. H., inquired the remedy for dog-wood and ivy poison; here we find *blood-root* a sure cure. Take the green root, and pound or cut so as to get the juice, and rub on the poisoned parts; taking the dry root powdered, or steeped, as a tea, in very small doses, three times a day, rubing the green root on at the same time.

Shelburne, Vt., Aug. 16, 1858. M. A. P.

NEW ROCHELLE BLACKBERRY—CHERRY CURRANTS.

Can you tell me the price of the new Rochelle blackberry plants, and where they are to be had? also the best mode of cultivating them? What season is the best for transplanting? How many plants are required to set out one-fourth of an acre?

Do you know anything concerning the cherry currant? and where the plants are to be had?

A Subscriber.

West Henniker, N. H., Aug. 10, 1858.

Remarks.—We do not know the price of the New Rochelle blackberry. You may have as many plants as you please by sending to our garden and taking them away, even to the last plant. We have nourished and cherished them for three years, and have not yet produced a dozen berries fit to eat. They sometimes grow very large, and are sour in proportion See another article in this paper about cherry currants.

—

SUCKERS AMONG CORN.

I have worked on several farms, and on some of them we cut the sucker away at the second time hoeing; on others we did not cut them away at any time. Where we left them, the ears were small; and where they were cut off, the ears were large and thrifty. Why should they do any good? The sap that flows into the sucker does the ear of corn no good, but takes goodness away from it. F. C. Shaller.

Essex, Mass., 1858.

Remarks.—We suppose the sucker bears the same relation to the stalk of corn to which it is attached, that side limbs or twigs do to a young tree, elaborating the sap and sending it on to perfect the fruit.

—

WHITE CROWS AND SWALLOWS.

I saw it stated that a boy in Georgia, a short time since, killed a white crow which was flying with a flock of black ones.

I saw, a few days ago, a white swallow flying with a flock of black ones, skipping over the water and mounting into the air. It resembled the black swallow in every form, as nigh as I could see. The question is, where did it come from?

Brandon, Vt. L. F.

—

QUERY ABOUT A HORSE I HAVE.

I have a horse somewhat above twenty years of age, who is perfectly sound and well while feeding on grass, but feeding on hay, and especially on clover, is so relaxed as to be almost unfit for use. Can any of your numerous readers or correspondents specify a cure for the above disorder?

South Scituate, Aug., 1858. M. F.

—

POISON PLANTS IN MEADOWS.

Will some of the correspondents of the *Farmer* inform me what will cure the poison of dogwood and ivy, as many suffer from the effects of it in this section of the country, and oblige a subscriber. N. M.

Atkinson, N. H., Aug., 1858.

EDUCATION OF GIRLS.

The subject of physical education is beginning to attract attention. The following remarks are from the Boston *Courier*, written by the editor after having attended a school festival in Faneuil Hall: "But there was one thing we noticed which did throw a little shadow over our thoughts. We stood on the platform, very near the boys and girls, as they passed by to receive a bouquet at the hands of the Mayor. We could not help observing that not one girl in ten had the air and look of good health. There were very many lovely countenances—lovely with an expression of intellect and goodness—but they were like fair flowers resting upon a fragile stalk. Narrow chests, round shoulders, meagre forms, pallid cheeks, were far too common. There was a general want in their movements of the buoyant vivacity of youth and childhood. The heat of the day and nervous exhaustion of the occasion were to be taken into the account, and due allowance should be made for them. But this was not the first time that we were forced to the conclusion that here in Boston, in the education of girls, the body is lamentably neglected. And it is a very great and serious neglect, the consequences of which will not end with the sufferers themselves. Of what use is it to learn all sorts of things during the first sixteen years of life, and to stuff the brain with all kinds of knowledge, if the price be a feeble or diseased body? A finely endowed mind shut up in a sickly body is like a bright light in a broken lantern, liable to be blown out by a puff of wind or extinguished by a dash of rain.

"If the destiny of women were to be put under a glass and looked at, like a flower, it would be of little consequence; but woman must take her part in performing the duties and sustaining the burdens of life. These young medal scholars, in due time, will marry men whose lot it is to earn their bread by some kind of toil, in which their wives must needs aid them. To this service they will bring an intelligent capacity and a conscientious purpose; but how far will these go without health and the cheerful spirits which health gives? A sickly wife is no helpmate, but a hindermate. If we neglect the body the body will have its revenge. And are we not doing this? Are we not throwing our whole educational force upon the brain? Is not a healthy city born and bred woman getting to be as rare as a black swan? And is it not time to reform this altogether? Is it not time to think something of the casket as well as the jewel—something of the lantern as well as the light?"

☞ Hale's experiments show that a sunflower, bulk for bulk, imbibes and perspires seventeen times more fresh liquor than a man, every twenty-four hours. Lawes' experiments "on the amount of water given off by plants during their growth," show that the clover on an acre that would afford two tons of hay, absorbs from the soil and gives off from its leaves 430 tons of water in 101 days, or eight thousand six hundred pounds per day. Those who allow clover, grass, weeds, or any other plants, to grow among their fruit trees or any cultivated crop, should not complain of drought.—*Genesee Farmer.*

For the New England Farmer.

ANURING GRASS LANDS.

MANUFACTURE OF MANURE—TIME OF APPLICATION, ETC.

The manufacture of milk is a matter of much interest to all farmers of the milk-producing States. It is settled beyond a doubt, in my mind, that milk is soon to become the leading article of production in the Northern States. The discussion of this question very naturally leads to the consideration of the most economical method of its production. It is well understood among our thinking farmers that green or early cut hay and rowen, is the best fodder for producing milk in the winter months, or as soon as the grass upon our hills shall have failed us, as feeding upon the old fog or past litter grass, late in the fall, will invariably give the cows a back set. A resort to wheat shorts and corn meal is the only remedy in this case. The true principle of agricultural science introduces another practice, plain, cheaper and altogether dissimilar. Before we proceed farther upon this point, let us state one great *fact;* no farmer need think of success in his business without a good barn cellar, sufficiently capacious to enter into the manufacture of manure in large quantities; this is the basis of all successful farming. All the poorer portions of the farm should be turned into pasturage, and the whole energies and resources of the farm bestowed upon less acres.

MAKE LARGE QUANTITIES OF MANURE,

by hauling into the barn cellar leaves, leaf mould, muck, hay, straw, brakes and other vegetable matter in the fall, to be used for the field crops next season. Throw down all the hard droppings of the stock upon the materials already in the cellar, catching the urine as it passes through the leanto floor in a vat or cistern, built immediately under the floor for this purpose. The vat does not necessarily need be as long as the leanto floor, as by a narrow opening between the planks behind the stock, the liquids may pass down into a trough made of boards, and conveyed to the vat in the centre, of any capacity you desire. The main object of the vat is to accumulate liquids, and by the use of spouts convey them to any part of the cellar, which could not be done without it. All highly concentrated manures, as night soil, hen dung, hog dung and sheep dung, should always be diluted in several times their bulk in water, and poured upon less fertilizing substances. A large quantity of manure may be made in this way, from an ordinary stock. This, I have said, is for the field crops of the next season. As soon as this is drawn from the cellar, haul in native soil from the bank, muck and road wash, tie up your cows at night during the summer, gather into the vat as before all the powerful stimulants to be diluted and poured upon the heap, shovel over occasionally to pulverize and make fine, to be spread upon the grass land in the fall.

THE TIME FOR SPREADING

manure upon grass land gives rise to much dispute, as much depends upon circumstances and the conditions of the soil to be dressed. Upon dry land, where the several crops have been taken off, the first of November is a good time. Spreading at this season of the year, the land gets all of the benefits of the late rains and early snows of November and December, and becomes finely pulverized by the frosts of winter. A neighbor of mine has an acre of grass land, (light sandy soil,) from which he cuts three tons of hay every year, in two crops, two tons the first cutting and one the second. Eight cart loads of manure a year, keeps it up to this condition. Does that pay? Suppose some of our farmers who now mow over forty acres to get twenty tons of hay, should put ten acres of their best land into this condition; would it not pay better than it now does? Twenty tons of good, sweet juicy hay the first crop, and ten tons of rowen the second crop, and kept there by the use of eighty loads of good compost manure annually! Any industrious, progressive farmer, with twenty head of cattle and a good barn cellar, can bring ten acres of land into this condition in five years, and not neglect his field crops. Hay cut thus early, well dried and salted with two quarts of fine butter salt per ton, will sustain a bountiful supply of milk ten months in a year, instead of seven, as fed up dead hay and dry corn fodder in the old way. The salt so used, (two quarts per ton) will cause the food to relish better, and produce more milk by causing the cows to drink hearty, (give them warm drink in winter,) twice each day; furthermore, salt is the great preserver of animal and vegetable matter, and I firmly believe it is essential to the good health and condition of both man and beast. The cultivation of root crops for stock is both judicial and necessary to their health and thrift when fed upon the dry fodder and husks of the old plan; but I am satisfied roots will not pay when fed in connection with green fodder.

LEWIS L. PIERCE.

East Jaffrey, N. H., Aug., 1858.

AN AGED COUPLE.

The following fragment is from Gould & Lincoln's new work by Hugh Miller, entitled, "The Cruise of the Betsey, with Rambles of a Geologist," at page 390.

In this part of the country was an aged couple who had lived together, it was said, as man and wife, for more than sixty years; and nowhere was their tombstone and epitaph. They had lived on long after my departure; and when, as the seasons passed, men and women whose births and baptism had taken place since their wedding day, were falling around them well stricken in years, death seemed to have forgotten *them;* and when he came at last, their united ages made up well nigh two centuries. The wife had seen her ninety-sixth, and the husband his one hundred and second birthday.

It does not transcend the skill of the actuary to say how many thousand women must die under ninety-six for every one that reaches it, how many tens of thousands of men must die under one hundred and two for every man who attains to an age so extraordinary; but he would require to get beyond her tables in order to reckon up the chances against the women destined to attain to ninety-six being courted and married in early life by the man born to attain to one hundred and two.

For the New England Farmer.

CORN AND CORN-FODDER.

Mr. Editor:—The profits of farming usually turn, not on a single article, but on the various productions of the farm, and on none more, especially in New Hampshire, than in securing in a good condition corn and corn-fodder. The risk to the farmer on his corn crop, if I am not mistaken, is now much greater than it was forty, fifty or sixty years ago. From a child I have been somewhat accustomed to farming in a small way, usually cultivating from one to three acres of corn. Those whose corn fields cover ten, fifteen or twenty acres, will not, of course, feel interested in such small business. But you have probably more readers who will class with me, than with them, and it is for their benefit I write. What I have learned has been chiefly by experience and observation; and I am confident that my profits from a single acre have been greater than some of my neighbors from four or five acres. With your permission and aid, Mr. Editor, I will tell your readers "how I work it."

I endeavor, in the first place, to have good ripe seed, and to get it into the ground as early as the soil and season will warrant its quick germination and growth, and not before. I plow or cultivate and hoe three times. In respect to the ingathering, I first consider what advantages I have for securing, in a good condition, both the corn and the fodder; for the fodder from a single acre, if well secured, is quite an item in keeping stock. By cutting the stalks in a straw-cutter, wetting or sprinkling on a little meal, not a pound will be left. Most farmers have more or less room in their barns, or sheds where, for a time, the crop may be secured from rain, and in such a manner as not to be damaged by moulding, if set up or spread upon poles, where the air can circulate freely, and drying be effected without injury, although put in while quite green; and all kinds of stock are fond of such fodder. The corn, also, will be sweet and good for table use. As the time for frost approaches, I calculate, if occasion requires, to avail myself of all such advantages on my premises. If frost does not come at the proper time, after the corn is glazed over, and the tassel sere and dry, I cut the stalks of a part of my field and give them the best chance I can to dry for one or two days before binding up. I then bind and stook; and if the weather is favorable, let them stand until they can be safely packed away in the barn. But if a storm threatens, I get them in, and scatter about to dry, as best I can. That part of the field from which I cut the stalks I let stand until the corn and husks are so dry as to be in no danger of moulding. Ripened in this way, the husks are usually bright and good—much better than if cut up green and stooked out.

But sometimes in the early part of September there comes "a nipping frost." Previous to such a frost, if I can foresee the danger, I cut up at the roots, the remainder of the field; or if the frost steals upon me unawares, and is so severe as to affect the stalk, I cut it early in the morning and throw it into piles with the frost upon it. In this way the injury by the frost is much less than to let it stand until the sun abstracts the frost. I then bind with a band near the top. For convenience in handling, the bundles should not be very large.

If the weather is favorable, I give it what chance I can for two or three days to dry on the ground; but mean, if possible, to get it under cover before rains come. (And here let me say, that I imagine caps might be even of more use than in securing hay.) I then put it in as good condition to dry as possible, in leantos, sheds or out-houses, upon poles or hooks, where the air can circulate freely, and let it remain until it is so dry that both corn and fodder may be packed away without liability to mould. Thus I have good sweet corn for bread; and for my stock, fodder which is eagerly devoured.

I remember one year when the fall was unusually wet, I secured my little crop of about one acre in this way and had it good. One of my neighbors had about five acres which he cut up and stooked out and let it stand through long storms until it was almost worthless. I would certainly not have exchanged my one acre for his five. In this way I am confident the scale is often turned; and farming proves profitable or unprofitable just according as it is conducted. But "wisdom is profitable to direct, and they that are wise shall understand." N. S.

Monadnock, 1858.

AGRICULTURE IN NEW HAMPSHIRE.

We learn that the Hon. Caleb Cushing, of this State, has accepted an invitation from the *Connecticut River Valley Agricultural and Industrial Association*, to deliver an address before them at their Annual Fair, to be held in Charlestown, on the 21st, 22d and 23d days of September next.

The limits of this Society, we believe, embrace all of the Valley of the Connecticut River within New Hampshire and Vermont, a territory unequalled, perhaps, by any other of the same extent in New England, not only for the beauty of its scenery and the fertility of its soil, but also for the variety and excellence of the most important domestic animals.

We hope that General Cushing will find the occasion graced by an assemblage of the yeomanry of the valley, with their wives, daughters and sweethearts, who will be attentive hearers of what he says.

From a knowledge of the hospitality and urbanity of the people of Sullivan county, gained by frequent association with them, we feel confident that all who visit them on this occasion will be cordially received and handsomely entertained. They have made extensive preparation for the accommodation of exhibitors and visitors, in ample halls, stables, pens, &c., and have secured the services of *Hall's Boston Brass Band* to enliven the occasion, and to awaken new echoes among the hills of old Sullivan, and perhaps across the river in a sister State.

Our opinion, we trust, is well understood, as

it regards whatever of glare or glitter, of military display, of jockeyism, or political influences, that may give tone or coloring to these festivals of the farmer. We shall steadily oppose them all, under whatever blandishments they may present themselves, or by whomsoever they may be introduced. Nothing on earth can keep them pure, and make them useful, but a steady, uniform adherence to the principles upon which they were established, viz., *improvement in the art and science of Agriculture.* When this is lost sight of, and the occasion is made mainly to minister to the passions, then will one of the best customs of our people have lost its efficacy as a co-operator in the progress of rural art, and other customs will rise upon their ruins, having at least doubtful, if not decidedly demoralizing tendencies. We utter these words now, before the opening of the season of festivity, because in some cases last year we thought the true object was lost sight of, and display and excitement ruled the hour. We trust that wisdom will guide the counsels of our various societies, and that no word of reproach shall justly be suffered to rest upon them.

USE OF FAT IN ANIMAL ECONOMY.

The extraordinary abundance of fat in the bodies of animals inhabiting the intensely cold polar regions may be philosophically considered as a surplus stock of fuel, to be burnt for sustaining animal heat and motive power. Without this internal resource for a supply, during periods when no other available supplies of food are procurable from external sources, the animals of the arctic regions would speedily become frozen, remaining like marble statues fixed on the surface of the fields of ice and snow.

A most remarkably abundant provision of fatty and oily matter, formed from hydrogen and carbon, is found in the blubber which envelopes the bodies of the stored-up whales like a thick blanket. The philosophy of this surprising provision of available food and fuel, accumulated in these large fishes, admits of the following explanation. It appears that whales, in ranging from one feeding-ground to another, sometimes have to cross broad oceans. Without an extraordinary supply of carbon, provided like a stock of coals in the bunkers of a steamer, for sustaining continuous combustion during a long voyage, the whales might fail in exerting a motive power sufficient to propel their great bodies through the waters of the broad ocean. Whales have been captured from whose bodies more than two hundred barrels of oil have been extracted. As spermaceti and cetine contain above 90 per cent. of carbon and hydrogen, one of these fishes, therefore, carries with him about ten tons of combustible fuel, which is ready at all times to become absorbed and burnt, whenever this leviathan of the deep desires to develop powerful impulses of motive power, and rises to the surface of the ocean, to draw in a long breath of air, containing the requisite quantity of oxygen to burn his supply of carbon, and to allow it to recoil to its natural condition of carbonic acid gas. The more a whale exerts his locomotive powers, the oftener it is necessary for him to breathe, or "blow," as the whalers term it.

As amid abundant granaries and well-stored market-houses where there is little danger of falling short of a due supply of daily food, it is manifest that in the economy of nature there is no real necessity for this extraordinary supply of a surplus stock of carbonaceous fuel, enveloping the ribs of human beings.

The hump on the back of the camel—the locomotive engine of the wild deserts of Asia and Africa—may be deemed by the superficial observer as a deformity, or as a sort of natural saddle, ready prepared to bear the impositions of loads of merchandise, and thus stamping this animal as a "beast ot burthen," apparently by the original design of the Creator. But this uncouth appendage, so far from being designed expressly for the purpose of a saddle, does really subserve the more essential purpose of a knapsack of provisions, to supply from this superabundant deposit of fat, which principally composes this hump, the carbon necessary for propelling the locomotive mechanism of his body across the wide wastes of sand, where no blade of grass is found to replenish his exhausted supplies of carbonaceous food. A surplus supply of water is similarly provided in the extraordinary sacs of his stomach, as a substitute for the tank applied to an artificial locomotive engine.

Adventurous mariners navigate their barks among the icebergs of the polar regions, to procure the valuable store of fat organized into the bodies of the whale, of the seal, and walrus, which they transport to marts of commerce for distribution, for the purpose of being burned as fuel in the lamps, instead in the lungs, the purpose for which it was originally designed. Men strip off the fur and down from the bodies of animals, whose breasts, exposed by submersion into icy water, and to keen wintry winds, require these non-conducting coverings, to sustain the animal heat generated by combustion in their bodies. These prized spoils of soft downs and furs are appropriated as a covering to sustain the same genial excitation within the glowing bosom of a civilized belle. In the colder bosom of an Esquimaux belle, residing in a crystal palace, and beneath a dome built of blocks of ice, not only are these soft external appliances of robes of fur necessary for sustaining a genial glow of life's warm current, but also the most extraordinary combustion of fatty, oily matter in her lungs. One of these belles, according to Capt. Parry's narrative of his voyage to the Arctic regions, sipped the oil from an extinguished lamp, and received a tallow candle as an acceptable bon-bon, the courteous captain kindly warning her by signs, not to choak herself by attempting to swallow the wick. It thus appears that the quantity of organic carbon which is scarcely adequate to serve as fuel in developing warmth and locomotive power in the bodies of human beings dwelling in the Arctic regions, would over-heat the bodies of the same individuals in warm tropical climates, and would speedily induce fatal inflammatory disorders.

To the ignorance of this simple fact may be ascribed the deaths of myriads of voyagers from

cold to warm climates. On the contrary, voyagers from sultry to cold climates require the combustion of more carbon in their lungs to sustain the average temperature of blood heat. Indeed, the sensation of declining warmth is so immediately attendant on a diminished supply of food that the terms cold and hunger have become associated together, and the phrase starving with cold, has lately been introduced into popular language in these countries.

Numerous facts tend to demonstrate that a vigorous and healthful condition of the animal mechanism can only be sustained by a due relative apportionment of the atoms of carbon and hydrogen, presented in the thin membranous air vessels of the lungs to the contact and union with due relative apportionment of the atoms of oxygen inhaled at every breath, and by the appliances of non-conducting clothing, to prevent the too rapid propagation of heat from the body. And thus the mechanical motive power of the vital agency of "life" truly subsists by the combustion of carbon, in accordance with the emblematical flame of the lamp, which was once lighted in every tomb by a classic and superstitious people, as allegorically representing the bright spirit which, for a brief time, animates the body, and then vanishes forever, like the quivering and expiring flame.—*Canadian Agriculturist.*

For the New England Farmer.

ORNITHOLOGY.

BY S. P. FOWLER.

The belted kingfisher has long been known in the United States, and until the annexation of new territory to the union, was the only species. But since the admission of Texas, a handsome little bird, called the Texan green kingfisher, has been discovered, *(Ceryle Americana,) (Gmelin,)* which may readily be distinguished, by its small size and different plumage, from the common or belted kingfisher. The bird under consideration was known to the ancients by the name of Halcyon, and many fabulous stories are told of it, by the early writers. They supposed that it built its nest upon the surface of the sea, amongst the foam of the waves, and that it had the power of calming the troubled deep during the period of incubation. They only sat on their floating nest a few days, and during that short period, which was in the depth of winter, the mariner might, they said, sail in perfect security. Hence those days were called *Halcyon days.* There is a more modern fancy in regard to the kingfisher, which supposes that this bird, when stuffed and hung up overhead in a room, by a thread, will point the direction of the wind, after the manner somewhat of a dog vane. M. Du Pratz, in his history of Louisiana, says: "The kingfisher, it is well known, goes always against the wind, but perhaps few people know that it preserves the same property, when it is dead. I, myself, hung a dead one by a silk thread, directly over a sea compass, and I can declare it as a fact, that the bill was always turned towards the wind." Shakspeare, when speaking of sycophants, alludes to these fabulous notions, where he says they

> "Turn their Halcyon beaks,
> With every gale and vary of their masters."

Mr. Cassin says in his Birds of America, the family of kingfishers embraces about ninety species, of which seventy-seven are in the collection of the Philadelphia academy. The habits of the belted kingfisher are well described by our ornithologists, and the readers of the *N. E. Farmer* can consult them if they choose. I notice some of them speak of their nests being composed of a few sticks and feathers, but those eggs which I have examined were laid upon the bare earth. Their solitary and pisciverous habits, in the estimation of some persons, render them unfit themes for rural composition,but the bird really gives beauty and interest to the scenery around our mountain streams, and inland lakes, which it visits. And if the kingfisher has nothing particularly interesting in its general appearance, which, I am ready to admit, is grotesque, or in its note, which would probably remind a citizen of a watchman's rattle at midnight, calling for aid to secure a burglar, it certainly at least possesses one good trait of character, that of troubling no one, which is more than can be said of many of our birds. It likewise has the commendable habit of minding its own business, which is singularly honest and legitimate, not to say apostolic—that of fishing. And well may we quote and apply honest Izaak Walton's lines to our bird :—

> "O, the gallant fisher's life,
> It is the best of any;
> 'Tis full of pleasure, void of strife,
> And 'tis belov'd by many:
> Other joyes
> Are but toyes;
> Only this
> Lawful is:
> For our skill
> Breeds no ill,
> But content and pleasure."

The kingfisher is not confined to our inland waters, but is seen also on the sea-coast, around the harbors and rivers that empty into the ocean, diligently engaged in fishing in the shallows about their shores. And there is probably no bird better known to the boy, who resorts to the salt water to bathe or fish, than the kingfisher; and when his object of pursuit, the catching of minnows or tomcods, is the same, how often has he been surprised by the sudden approach of this bird, in its gliding flight and rattling churr. How often has he seen it plunge into the stream after a fish, and having caught it in his bill, return to its stand, a post of a water fence, and swallow the glittering prize headformost, and shake its head to clear its crest from the brine, and perhaps proud of the capital dive it made. And how often has the boy, unobserved as he was fishing from the sedgey bank, continued to watch the feathered fisher, forgetful of the many good bites at the end of his line, and viewing with astonishment the strange behavior of the bird, who is apparently choking with the fish it has just swallowed, when after much shaking of the head, gasping and violent renchings, it throws up a bundle of fish bones! But our bird is in no particular danger from being choked with its food, neither does it suffer from a bad or imperfect digestion, as we might ignorantly suppose, when viewing its most singular motions on its perch, where sitting by the hour together it digests its food and ejects the bones of the fish it has swallowed, in the form of pellets. These

are always to be found, where they are accustomed to perch, as well as in their breeding places, and has given rise to the notion in the old writers, that they build their nests of fish bones! The kingfisher is very generally found throughout the United States, and frequents all the large rivers in the far countries, up to the 67th degree of latitude.

Danvers-Port, Aug. 4th, 1858.

SIGNS OF THE RIPENESS OF GRAPES.

To produce a good wine, it is most important to know the external signs the grapes will have when perfectly ripe—each wine-grower should be well acquainted with them. But still a great many, even knowing these signs, will gather their grapes before full maturity, for the sake of gaining more wine—their principle is quantity, not quality. The signs are—

1. The stem of the grape should be of a brown color.
2. The cuticle of the berry must be clear and transparent.
3. The berries should separate easily from the stem.
4. The seed must be of a brown color.
5. The juice must be sweet and sticky.

Do not cut the grapes early in the morning, with the dew on them, nor during rainy weather, nor shortly after a rain.

Pick out the berries stung by wasps, or other insects, as these commonly have a putrid and sour taste. The unripe or green berries should also be carefully removed.

The precise time of perfect ripeness can only be discovered by chemical analysis, when the relative quantity of sugar and acids can easily be determined. The change of gum, dextrine and acids into sugar can easily be ascertained; and a suspension of transformation, or a consequent retrogade action, would show the real time of perfect maturity. L. REHFUSS.

When shall we have these critical and chemical analyses, which so often prove of great value.

Ed. West. Horticulturist.

THE AMERICAN STAPLE.—*The Egg Crop.*—It is estimated that there are 103,600,000 laying fowls in the country, of which 50,000,000 lay one egg a day throughout the year. This would give the annual crop of 18,250,000,000 eggs, and these at eight cents a dozen, would be worth $121,666,666!—*Buffalo Express, Aug.* 4.

The cotton crop of the United States, estimated at the seaboard, according to the census of 1850, amount to $78,264,927. Estimated at the same point—that is, according to New York prices today—the egg crop of the United States would amount to $259,011,666, or twice as much as the cotton, tobacco, rice, hay, hemp and sugar crops of the slave States put together. Adopting the estimate of the Buffalo print, the average of eggs consumed by each inhabitant of the United States each day is about two.—*New York Post.*

☞ A farmer returning home in his wagon, after delivering a load of corn, is a more certain sign of a national prosperity, than a nobleman riding in his chariot to the opera.

EXTRACTS AND REPLIES.

MEADOW CRANBERRIES — MEADOW MUD—IVY—PASTURE LANDS.

I wish to inquire through the columns of your paper what course it is best to take with a mossy meadow? (*a.*) The grass is very light; the meadow has been ditched, but it is filled up, and there is a good chance to drain it.

Would cranberries do well upon it? (*b.*)

Would meadow mud be beneficial to plow into light soiled land? (*c.*)

Would poor pasture land that has been plowed be the better to plow again and seed it?

What will kill ivy? GEORGE.

(*a.*) Drain and plow the meadow— manure with compost and seed with good upland grasses.

(*b.*) If you find cranberries growing naturally about the meadow, there is little doubt but they would do well transplanted there.

(*c.*) The meadow mud, old and well pulverized, would be excellent on your light land; and your "poor pasture land that has been plowed," would greatly rejoice if you were to plow it again, *manure it liberally* and re-seed it.

—

ROOTS FOR STOCK.

In your advocacy for the culture of root crops for the feed of stock, you might with great propriety have referred to the late Mr. WEBSTER, as well as Mr. BIDDLE—both first class minds in their day. I remember to have heard Mr. Webster discourse for half an hour or more, on the culture of the turnip in England, shortly after his visit to that country. I also remember seeing at the time of his burial a luxuriant growth of this vegetable, on his own fields, at his farm in Marshfield—for he was no visionary theorist—but was always ready to illustrate his faith by his works. Said he, "hundreds of acres of turnips are grown in England, expressly for the feed of sheep. Not only grown *for*, but harvested *by* the sheep themselves." Perhaps this mode of harvesting will not answer so well in our climate, where frosts and snow so much abound, when the feed is the most needed. Pardon these crude suggestions. I make them because you claimed to be excused from giving us something better, as you undoubtedly would, if you had attempted to answer my inquiry. P.

REMARKS.—We are glad to be reminded of Mr. WEBSTER'S teachings on this important subject, by our observing correspondent. We have often quoted Mr. Webster's opinions in regard to the root crop, and it was, more than anything else, his plain and forcible illustration of their value, that removed prejudices that we had long entertained against them as food for our neat stock.

—

CURE FOR DOG-WOOD AND IVY POISON.

In last week's *Farmer* I observed that it was asked by a subscriber what would cure dog-wood or ivy poison? I will tell you what is a sure cure when taken in season. Take the plant called mouse-ear, steep it to a strong tea, then add

milk; drink and wash in the tea, and by doing so a few times it will effect a complete cure. If the mouse-ear is not taken in season it will help. It is good for sheep when poisoned with lamb-kill. SAMUEL WILSON, JR.

South Danvers, Aug., 1858.

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REMEDY FOR CURCULIO AND BLACK WART.

In answer to Mr. Wait, of Danvers, I would say that myself and some half dozen of my neighbors have for the last three years scattered air-slaked lime over our plum trees, from the time the blossom leaf begins to fall until the curculio has done working, which I think is about four weeks. Our trees are all in a fine, healthy state, and loaded with good, smooth fruit, and the trees are perfectly free from the black wart,—so much so that they attract the notice of strangers passing through our village. We use lime very freely, as often as the rain or dew takes it off. I don't know of anything the lime injures that it falls on.

Some throw the lime by hand. I use a box made of tin, the size and shape of a corn popper, the bottom filled with small holes, and this fixed to a pole of any length. I prefer oyster shell lime, as it is cheap and ready prepared. Plum trees are dead and dying all around me where they are left to take care of themselves.

Gardner, Mass., Aug., 1858. J. W. HILL.

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NATIVE GRAPES.

Mr. JOHN FISKE, of Holliston, has sent us some very large and nearly ripe native grapes, which he calls *August grapes*, as they usually ripen in that month. He states that he has taken this season, from a single vine, 375 pounds, which he has sold in Boston market for ten and twelve cents per pound. Profitable vine that! The grapes before us are too acid for our taste, and perhaps would be for dessert fruit—but for preserving and jellies must be valuable. We accept his proposition to furnish us a plant for our own grounds.

—

ABORTION IN COWS.

A correspondent at Groton suggests that the *ergot* in rye may be the cause of abortion in cows. He says:

"Rye produces ergot in larger quantities than anything else, and some farmers are in the habit of feeding freely with it to increase the quantity of milk—that may have some effect. Then there are several grasses which produce it to a greater or less degree, depending upon soil, season, &c.; wet seasons, or soil having a tendency to produce larger quantities. If you have not examined it with this view, this suggestion is all that is necessary."

—

PLANTING PEAS IN THE FALL.

As a matter of experiment, I planted in my garden two rows of peas of an early variety the eighth day of December. I buried them somewhat deeper than my usual custom; I laid over them a good covering of leaves, on which I put boards to keep them in their place. These I removed in March. On the sixth of April, I planted, side by side, the same variety of peas. Those planted in December, came up seven days before the others; were in blossom four days earlier, and were ready for use June 20th, and the spring planting only two days later. Probably not more than one-half the December planting ever vegetated; and at no time did they look as healthy as the others, and their yield was not half as much. Such is my experience in fall planting. Shall I have the experience of others, or must I try again, before I decide that fall planting is not to be recommended?

East Hampton, July, 1858. H. S.

—

CHAIN PUMPS.

Will you inform me through the *Farmer* what is the best kind of pump in a well thirty-two feet deep? How will a chain pump work?

West Townsend, 1858. C. W.

REMARKS.—In one of our recent rambles we found a chain pump in use for drawing water for the farm stock; it operated easily, brought water rapidly, and was cheap. They are now in common use, and we believe they give general satisfaction.

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CREEPER FOWLS.

Will you, or any of your readers, have the goodness to inform me through the medium of your columns, where I can buy a few heavy fowls of the creeper class, with *very* short legs?

AN OLD SUBSCRIBER.

Boston, Aug. 31, 1858.

REMARKS.—We cannot—who will?

—

CHERRY CURRANTS.

Can you inform me through the *Farmer* where cuttings or plants of the cherry currant can be obtained, and at what price per hundred?

Bolton, Mass., Aug., 1858. N. H.

REMARKS.—M. P. Wilder, Boston, has the cherry currant in his catalogue, and gives the price as $2,00 per dozen roots or plants.

THE DIFFERENCE IN COWS.—It is not the cow that gives the most milk that will yield the most butter, nor is it the cow that gives the least milk that will yield the best cheese.

During a discussion upon the breeds of cattle in Scotland, as reported in the *Farmer's Magazine*, Mr. Kay, of Hilhead, in a humorous speech advocated the utility of the Ayrshire breed, but said that a good deal depended upon the keep and soil.

In regard to crossing, he said he had tried it, and found his best plan was to come back to the pure breed again. He said there was no accounting for the difference between the richness of cows' milk. He, himself, had an Ayrshire cow that gave 18 (Scotch) pints of milk per day (36 quarts Imperial,) and only three pounds of butter in the week, while he had a little cow whose milk produced a pound of butter daily.

THE POTATO ROT—ITS CAUSE AND CURE.

The opinion is general, we believe, that the potato rot is caused by atmospheric influences—we thought so until 1855, when LYMAN REED, Esq., then of Waltham, Mass., but now of Maryland, placed before us evidence that we could not resist, that *it is caused by an insect.* In 1847, Mr. ALFRED SMEE, surgeon to the Bank of England, investigated the matter with tireless assiduity, which resulted in the conviction that the rot was occasioned by an insect, and the publication of a book of 150 pages—but Mr. Smee suggested nothing as a remedy beyond picking the insect from the potato before planting it.

Mr. Reed has a remedy, upon which he has obtained a patent. Mr. Smee and Mr. Reed both impute the mischief to an insect which they call the *Aphis Vastator.*

More recently, Mr. ALEXANDER HENDERSON, of Buffalo, N. Y., has discovered that the *Phytocoris Linealaris* of P. de Barræ, or the *Capris Obliniatus* of Say, is the cause of the potato rot.

In that excellent journal of science and art, the *Scientific American*, we find some illustrations of the potato leaf and tuber, and the insects upon them, and an extended history of the discovery. We have thought the subject of sufficient importance to justify us in incurring the expense of the engravings which are beneath presented,

and with such portions of the history as we can find room for. In our next paper we propose to give Mr. Reed's history of his discovery. The *American* says:—

"One thing appears certain: Mr. Henderson has discoved that the *Phytocoris* are the primary cause of the potato rot, strictly so called, which first appeared in 1845, and which is identical with that of the present season.

If a tuber be examined with a microscope just before planting, on it may be seen a small, yellowish, translucent oval object, secured, as is common with insects' eggs, by a gummy substance to the potato. This will produce unsound potatoes, and the egg is that of the *Phytocoris.*—When the tuber is planted at the ordinary depth, this egg hatches, but if the potato is planted deep, the egg is killed, and therefore *deep planting* is one remedy, because air and light are prevented from coming to the delicate egg. After a sufficient amount of warmth and moisture has been obtained by the egg, the shortest time that has yet been observed being six days, the shell opens along its greater axis, and out comes the small insect, without wings, from about the twentieth to a twelfth of an inch long. It has six perfect legs, two attenuæ, a proboscis and a pair of brilliant black eyes. The proboscis is about two-thirds of its body in length, and one-third of its length from the head is thick, seen coiled upon itself at *c*, Fig. 3 (which is an enlarged view of the perfect insect, taken, with the other views, from actual plants, tubers and insects, brought to us by Mr. Henderson,) and the remainder is flexible and needle-like. It contains three tubes, through one of which it sucks up the juice of the plant for its nutriment; through another it probably ejects a poison into the plant, and through the other it may perform part of its respiration. The young insect being born alive, instantly requires nutriment, and commences feeding upon the seed, which, without the young are very numerous, does not perceptibly interfere with its growth. According to the amount

of heat and moisture in the soil, this goes on from two and a half to three months, when the insect gets wings, and the vine has attained its full growth.

The insect has all this time been working at the tuber (Fig. 2,) absorbing much of its nutritive juice, and injecting a poison, which at first appears in spots, as seen at *a*, Fig. 4. These rapidly spread to blotches, *b*, daily becoming more rotten, as *c*, and at last leaving very little of the sound potato, *d*.

The winged insect, tired of his dark underground quarters, moves a few stories higher, and settles himself upon the leaves of the vine, as seen at 1. They naturally attack the leaves and main stem, which, having their juices taken from them, wither and die, leaving little save their silicious and carbonaceous skeletons, and producing the appearance of the rot. The best evidence that a poison is also injected into the plant, is found in the fact that fungi in great abundance make their appearance, and these, as is well known, are generally the result of putrefactive fermentation.

Sometimes, in cold and stormy weather, the insect again descends and feeds upon the potato, which by this time is covered with fungi also. In the winter they emigrate, and nestling among the warm leaves of the mullen plant, endeavor to keep alive until the succeeding spring. Mr. Henderson has been engaged observing these insects since 1850, although for five years previously he had investigated the causes of the potato rot. On page 382 of the present volume of the *Scientific American*, we gave a brief outline of Mr. H.'s discoveries, from the Buffalo *Commercial*, which was the first newspaper that gave an extended notice of these facts.

Feeling the importance of the subject, we have given this much space to it, knowing that the majority of our readers will look with eagerness for Mr. H.'s simple remedies, which are, killing the egg by sprinkling quick-lime upon the seeds —preventing its development by deep planting, by hoeing up well round the vines, and filling up the cracks in the soil by pressure—or by preserving an old Scotch method of planting, which is as follows: The ground is plowed about a foot deep, the manure put in, with three to four inches of soil on that, and then the potato planted. Crops set in this way have never failed, the vines sometimes being attacked, but the tubers always remaining sound. We hope that many of our readers will set to work and experiment on this matter, and although the bug is very active and lively, he may be caught by shaking the vine quickly and picking him up."

FROG SHOWERS.

It may not here be out of place to give the interpretation of frog showers, as now most generally received by most competent judges. The actual fact, that considerable spaces of ground have been suddenly covered with numerous small frogs, where there were no frogs before, has been proved beyond a doubt. Some have called in the aid of waterspouts, whirlwinds, and similar causes, to account for their elevation into the regions of air, and some have even thought that they were formed in the clouds from whence they were precipitated. It has generally been in August, and often after a season of drought, that these hordes of frogs have made their appearance; but with Mrs. Siddons, we will exclaim, "How got they there?" Simply as follows: The animals have been hatched and quitted their tadpole state and their pond at the same time, days before they became visible to, or rather observed by, mortal eyes. Finding it unpleasant in the hot parched fields, and also running a great chance of being then and there dried up by the heat of the sun, they wisely retreated to the coolest and dampest places they could find, viz.: under clods and stones, where, on account of their dusky color, they escaped notice. Down comes the rain and out come the frogs pleased with the chance. Forthwith appears an article in the county paper; the good folks flock to see the phenomenon. There are the frogs, hopping about; the visitors remember the shower, and a simple countryman swears the frogs fell in the shower, and he saw them fall; frogs, visitors, countrymen, editors, are all pleased, and nobody undeceives them, nor are they willing to be undeceived.—*Buckland's Natural History.*

For the New England Farmer.

CROPS OF THE SEASON.

Four weeks ago, there was reason to expect a superabundant harvest from our fields. The corn had started into luxuriant growth. The potatoes never promised better. The onions were fair and bright—less marred by insects than was expected. Now, how changed the aspect; if rumor is to be credited, one-half our hopes are cut off.

One of our best cultivators informs us that he had ten acres of onions, from which he expected 4000 bushels to the acre, at least; and shall now be satisfied to get half this quantity. A blight has come over them, from what cause he knows not, unless it be the superabundant moisture, and almost frosty nights, and his fields look discouraging.

So true is it that man may plant, and industry cherish the growth, but to a power beyond the control of man must we look for the increase.

Sept. 1, 1858. Essex.

Wine from Wild Grapes.—Among the good things which are furnished from Pomona's kingdom, we occasionally find a glass of wine of considerable merit. A bottle from Mr. S. H. Allen's untamed vintage, at Shrewsbury, Mass., has just been broached, of which we have drank sufficiently deep to pronounce excellent. We have rarely tasted better from any source.

Wine from Currants.—A bottle of currant wine from E. C. Purdy, Esq., of Somerville, an account of which was given by him last week, was also opened and found to be excellent. Mr. Purdy's mode of making his wine has some novelties, and may be found worthy of adoption. So with generous wine, and the kind remembrances of friends, we find ourselves greatly sustained on one of the hottest and most oppressive days of the season.

For the New England Farmer.

CURRANT WINE---PLUMS, &c.

A few weeks since, the *Farmer* re-published an article which I have seen in various other papers, on the subject of currant wine. The article assumes that none but the best refined sugar is fit for the currant wine manufacture. Believing this to be a mischievous error, I will give you my experience in the matter. I have been in the habit for several years of making up about a bushel of currants, each year, into wine—finding it a very convenient article for various culinary purposes, to say nothing of its use as a beverage. The quality has been pretty uniformly good, though I have never used refined sugar in the manufacture. Last year I purchased a quantity of very damp sugar which came from the bottom of a molasses hogshead, and for which I paid three cents a pound. I send you herewith a bottle of the wine made with this sugar, and if you do not pronounce it a good article, I can only say that "tastes differ." The wine will of course improve by age.

The article of which I send you a sample was made as follows: I picked from my garden about a bushel of well ripened currants. Heating some water in a wash-boiler, I placed the currants, say half a peck at a time, in a tin pail, and placing the pail in the water, scalded the currants until they became soft; then putting them in a linen bag, squezed them in a portion of the cold water I had measured out for the wine, until the juice was all expressed. In this way I obtained the juice from a bushel of currants in about half an hour; and I am satisfied that the scalding of the currants very much improves the wine. The quantity of water used was from six to seven gallons, and to this mixture was added about forty pounds of the molasses sugar before spoken of. The whole was then put into a well-cleaned cask, the bung of which was left out for two days, then laid on loose for a fortnight, then driven tight. The product is about seventeen gallons of wine, and the only actual outlay in money was a dollar and twenty cents for the sugar,—say about seven cents per gallon!

An article in the *Farmer* of Aug. 28, from Mr. Wait, of Danvers, speaks very despondingly of the plum culture, and expresses a fear that, between the ravages of the black wart and the curculio, "that beautiful fruit is likely to become extinct." I have a few plum trees in my garden which do not look very much like extinction. True, the very wet season has caused much of the fruit to rot, and the curculio has bitten a larger share than the law of equitable distribution would seem to have justified—thus causing a large portion of the fruit to fall prematurely from the tree. This is the case particularly with those excellent varieties, Prince's Imperial Gage, and Coe's Golden Drop. The heavy rains of Aug. 28 also caused such plums as were near ripening to burst their skins. Despite of all these adverse circumstances, most of my trees are well loaded with fruit. One small tree six years from the bud, of the variety called Drap d'Or, has yielded, as nearly as I can guess, a bushel of very sweet and delicious plums. This variety rots very little on the tree, bears wonderful crops, is not much bitten by the curculio, and : think will prove a profitable variety.

The same correspondent of your paper speaks of what he calls the sap blight in pear-trees—causing the leaves to turn black and the fruit to wither up. This disease is sometimes erroneously called "fire blight." The late Hon. John Lowell discovered, as he thought, to an absolute certainty, that this blight was caused by a very small insect called the *scolytus pyri*, which sometimes eats a circle round the tree in the alburnum or sap-wood,—thus causing a complete interruption in the flow of the sap. The remedy—and Mr. Lowell found it effectual—is to cut off the limb on the tree some two or three inches below the part affected, and burn it. By this means the disease may soon be eradicated.

With regard to the black wart on the plum, I have kept my trees pretty free of it by using salt in various forms, and by applying the knife freely whenever and wherever it makes its appearance. This disease is also probably caused by an insect, whose bite poisons the sap and causes it to form a fungus, which soon becomes a black and unsightly excrescence. I do not dread this half so much as I do the curculio. E. C. P.

Somerville, Mass.

For the New England Farmer.

LETTER FROM MR. HOLBROOK.

RECLAIMING AND DRAINING.

MY DEAR MR. BROWN:—For a few days past, I have had occasion to make frequent visits to a lowland meadow near my residence, and belonging to the Vermont State Asylum. The draining and improvement of this tract of land has interested me considerably for several years; and two years ago this month, I gave a communication to the *Farmer*, describing the methods pursued in reclaiming it.

The meadow consists of about thirty acres of Connecticut river intervale, lying quite low, and subject to overflow from the river when swollen by spring and fall rains, a thaw in the winter, or an uncommonly rainy spell in August. The land was also made wet by a little brook from the uplands, and by cold springs in various places, bubbling up from a considerable depth. Before draining the meadow, the flood water did not all pass off with the falling of the river, but portions of it, together with the waters of the brook and springs, remained to stagnate, or in other places to diminish slowly by evaporation. The land was thus kept wet, cold and sour, and produced little or nothing but the coarsest swale grasses. An ox team could not be driven over much of the land at all, and a man could not mow in the wetter portions without going over shoes in water.

Six years ago this summer, we determined to attempt to drain and reclaim the meadow, and an accurate survey was made with levelling instruments, to ascertain the exact lay of the surface, and where ditches could be opened that would give motion to the water and pass it to the river. Favorable routes were found for the water to move off, and two capacious open ditches were accordingly made, starting at a common point at the upper end, sweeping through the lower portions of the meadow, by widely separate routes, but uniting in one ditch at the lower end, and from thence to the river. The eye, alone, would

not have pointed out these routes for the ditches, for where they united, nearest the river, there was a swell in the land, making the surface higher than where the ditches started; but the instruments showed that just beyond the swell the land was low enough for the purposes of drainage, and they also showed how deep the cut must be to pass the water through properly to the river. So much for the benefits of an accurate survey when attempting to drain lowlands.

The ditches thus completed and the land relieved of stagnant water, about ten acres were each year plowed up, manured with compost, and laid down with the cultivated grasses; and the third year from the commencement nearly the entire meadow had been reclaimed. After plowing a piece, and before manuring and seeding it, the occasional slight hollows were smoothed up to the general surface, by removing earth into them from the surrounding crowning places, with the oxen and scraper; so that no portion of the flood water should remain on the land, but all might readily pass off with the falling of the river. The breaking of the swale sod was not an easy task. The coarse water grasses had held possession of the land for a long period, and formed a strong, thickly-rooted and ugly sward, which could not be turned at all by a plow of the usual size. Accordingly a very large plow was procured, which, drawn by six oxen, went entirely below the roots of the grasses, and turned up deep, wide furrows, laying them over, in spite of their stiffness.

The condition of the land has been very much changed by draining and reclaiming. The waters are off at once on the receding of a flood, loaded teams can be driven anywhere on the land, and large crops of good hay have been taken off. On a few acres, however, of the lowest portions of the meadow first plowed and seeded, the water grasses are coming in. Indeed, it was not expected that the land could be wholly tamed of its wild, sour nature, at once, but rather that in the course of time, after several turns at plowing, manuring and reseeding, this wildness would be mostly taken out of it, and the water grasses, finding the conditions so modified, would nearly or quite disappear.

The lower portion of the meadow seeded down six years ago, where the wild grasses are getting in, is now being plowed up and reseeded, turning it over ten to twelve inches deep with the Universal Plow, rigged for double, or sod and subsoil plowing, and drawn by three yokes of oxen. The furrows turn over kindly now, and the oxen have good firm footing and a comparatively easy task. The land has evidently settled down several inches since it was first ditched and plowed. When plowed six years ago, this lowest ground, in particular, was very boggy, sticky and difficult to overturn, and the oxen were continually miring ankle to knee deep in the furrows, and had a laborious job of it.

After plowing, the land is to be harrowed fine, and some day this week will be stocked down with a mixture of fowl-meadow, herds-grass and red-top seeds, bushed in. We expect to be able to give a more permanently good quality to the hay produced on this land, by stocking it in part with the fowl-meadow grass. Several little patches of this grass have come in on the meadow, and it seems to occupy the soil whenever it gets foothold, in spite of floods or the coarse water grasses. It also yields a large swath to the scythe, and a very superb quality of hay. It is hoped that when the herds-grass and red-top after a while begin to disappear, the fowl-meadow grass will spread and occupy their place, and shut out the poorer wild grasses. I intend to observe the operation of the thing pretty closely, and may perhaps hereafter have something of interest to communicate about it. My impression now is, that the fowl-meadow grass may be successfully cultivated on low moist lands, and afford surer and larger crops of hay than herds-grass and red-top. The greatest difficulty, at first, in attempting to cultivate this grass, will be to procure the seed. A large seed-store in Boston was applied to a few days since for fowl-meadow seed, and could only furnish two bushels. Mr. Wetherell, however, informs us in the *Farmer*, in his recent interesting and valuable essay upon this grass, that the seed is gathered and sold considerably in the neighborhood of Portland, Me.

August and September form the most favorable portion of the year for draining and reclaiming wet lands. Haying and the early harvest being mostly finished, at this season, there is time for draining operations, and the ground is generally drier and more accessible and easily worked than at any other time in the year. Almost every farm has a larger or smaller tract of wet land upon it. Such land is generally the richest portion of the farm, and when once drained and brought under tillage, produces very large crops of grass certainly, and often of corn and other grain; while it requires much less manure to keep it productive than is necessary to bring up the worn-out dry lands to anything like the same fertility, or to sustain them in high heart after they have been made productive.

Improvements upon these wet lands generally prove profitable investments—more so than to expend the same money in buying more land. They in effect add to the territorial extent of the farm already owned. I have observed several instances where these improvements have made it necessary to provide more than double the barn room to store the crops of the farm than was orignally needed, and that too without any increase of acres. These lands are often so situated as to receive the wash of many acres of surrounding lands, and that wash, after the wet land has been reclaimed, is all turned to the best account. There is a peculiar satisfaction, also, in looking upon smiling fields, productive of the finest of grain and grass, that one has by his own efforts redeemed from a wild and perhaps pestiferous morass. He feels that he has added to the wealth of the country, as well as to his own resources.

The amount of outlay which may be necessary or politic in reclaiming swale lands, depends upon several circumstances, such as the constitution of the soil and subsoil, the way in which the water comes upon it, the location of the farm as affecting the value of land and products, and the price of labor. Some lands require thorough underdraining, with stone or tile, to give them that measure of dryness and warmth that shall bring out their full power of production. But they may be located where land and products are too cheap to warrant so large an outlay; and perhaps a more superficial drainage may be so well planned

and executed as to very essentially improve them, at a reasonable outlay, under the circumstances. In locations, however, where the value of land is high, and its products are near market and bear a high price, the thorough underdraining of bog-meadows and swaly lands needing that process, proves invariably a profitable investment. I have myself observed several specimens of underdraining, both with stone and tile, that have produced an astonishing change in the land, and from which very satisfactory returns are yearly realized.

It is often the case in New England, that wet lands are quite favorably situated for draining, so that a comparatively small outlay of well-directed labor will relieve them of undue moisture and coldness, and much change the quality of their products. Where the moisture arises from surface water, then it is only necessary to carry it off by open ditches. Or where the moisture is produced by springs flowing in from the adjoining higher lands, and the surface soil rests upon a subsoil not too close and impervious, then by simply opening a suitable ditch around the wet field, or across the side where the water comes in, so as to cut it off and conduct it away, and plowing the land deep and fine, backfurrowing it into beds of two to three rods wide, clearing out the dead furrows and smoothing up any little depressions there may be in the general surface of the beds, the land may be so far improved as to produce fine crops of grass certainly, and perhaps a rotation of good farm crops generally. I will mention two of the instances of this kind of improvement that have come under my observation.

Mr. Charles C. Lynde, of Guilford, Vt., has a tract of land situated on a gentle slope to the South, which was formerly too wet and cold for tillage purposes, and was mostly overrun with inferior grasses of a swampy nature. The wetness proceeded from a belt of cold springs, issuing out of the higher lands all along the upper or northerly edge of this field. A ditch was opened across the slope, on the upper side, and early in June, the wet land was deeply plowed, and then harrowed thoroughly. In August it was cross plowed, and harrowed several times both ways, so as to level the little inequalities of the surface as well as might be. Then it was laid up in quite crowning beds, two rods in width, by backfurrowing each bed two or three times with the plow, laying the beds up and down the slope. The dead furrows were cleared out with the shovel, spreading the dirt upon the beds, and levelling up any little hollows in them. The land was dressed with a compost of one part horse manure to about three parts sandy loam, and seeded thickly with herds-grass and red-top. It has produced heavy crops of good hay for several years, and will continue to do so by an occasional plowing, manuring and reseeding, or by top-dressing alone.

A few years since, in visiting the late Judge Hayes, at his residence in South Berwick, Me., my attention was directed to a lowland meadow of sixty acres, comprising a portion of his farm, and which he had brought into good grass. The meadow is of oblong shape, quite uniform width, and surrounded on all sides by gradually rising uplands. A large portion of it had been cleared and mowed annually as sour meadow, for a very long period. The meadow had no natural outlet, and was made wet by springs flowing in from the uplands, which though not sufficiently numerous to form a pond upon the surface, yet remaining in the soil, made it cold, wet and boggy. On the outer edges, where there was the most water, the muck was from one to two feet deep, and gradually lessened towards the centre, where it was six or eight inches deep—the whole resting on a clayey bottom. A ditch three feet deep, and of suitable width to give a good slope to the sides, was opened all around the edge of the meadow, thus cutting off all springs from the uplands. The water was all collected in one channel at the lower end of the meadow, and conducted off through a deep cut made in the upland, which at this point is lower than elsewhere, and after going a short distance, a sufficient natural descent was found to dispose of the water without further digging.

After ditching, a few acres of the meadow were each year plowed up by backfurrowing into beds of two rods in width, the dead furrows were cleared out pretty deeply, spreading the earth upon the beds and levelling their inequalities. Compost made of manure and upland loam was carried on to the land by sledding in the winter, and the next season spread and harrowed in, and the land seeded to grass. After mowing about five years, the land was again plowed by backfurrowing, manured and reseeded. In process of time the whole meadow was reclaimed in this way, and produced a great quantity of good hay. The meadow eventually became so settled and firm as to be accessible at all times with loaded teams.

But my communication is getting quite too long, though I think of several other points I would like to mention in connection with this matter of draining. F. HOLBROOK.

Brattleboro', Aug. 10, 1858.

KEEPING THE TEETH CLEAN.

Microscopical examinations have been made of the matter deposited on the teeth and gums of more than forty individuals, selected from all classes of society, in every variety of bodily condition, and in nearly every case animal and vegetable parasites have been discovered. Of the animal parasites there were three or four species, and of the vegetable, one or two. In fact, the only persons whose mouths were found to be completely free of them, cleansed their teeth four times daily, using soap. One or two of these individuals also passed a thread between the teeth, to cleanse them more effectually. In all cases the number of parasites was greater in proportion to the neglect of cleanliness. The effect of the application of various agents was also noticed. Tobacco juice and smoke did not injure their vitality in the least. The same was true of the chlorine tooth-wash, of pulverized bark, of soda, ammonia, and various other popular detergents. The application of soap, however, appears to destroy them instantly. We may hence infer that this is the best and most proper specific for the teeth. In all cases where it has been tried it received unqualified commendation. It may also be proper to add that none but the purest white or Castile soaps should be used. We have been in the habit of using finely pulverized charcoal for this purpose, and have found it a most excellent dentifrice.—*Scientific American.*

For the New England Farmer.

BOOK-FARMING.

BY ICHABOD HOE.

"Wal, neighbor Gilman, what new-fangled notion you goin' into now, I should like to know? Beats all, what nonsense some folks do run into, now'days."

"I'm building a hen-house, and I'm going to try and make a place under it to save the sink-slops and the guano from the hen-roost, too."

"Sink slops, guano, and fol-de-rol! All this comes of reading so many ag'cul'tral books and papers, and gettin' yer head full of silly notions, and spendin' yer means in what I call book-farmin', which is the worst kind of nonsense."

"It takes everybody to know everything, Mr. Richards, and everybody may be supposed to know something. You have your views, and have a right to them, and to act upon them. But whether you are wiser than others, remains to be seen."

"Wal, any fool might see that a large farm is more profitable to carry on than a little one, and if instead of spendin' yer time and money in buyin' and readin' so many good-for-nothin' books and papers, and on so many foolish notions, you were to save yer money and buy land with it, you might do something in the world."

"Perhaps any *fool* might think it wiser to half cultivate a great farm than well cultivate a small one; for my part, I am very well content with my thirty-acre farm, and perhaps a few years may convince even you that all the folly and nonsense in the world is not confined to books or those who read them."

"At the eend of that few years of yer book-farmin', I shouldn't wonder if you found yourself in the poor-house. My father was one of the best farmers of his day, and made more money than two or three farmers do now'days, and all the books and papers he used to buy in a year was an almanac."

"His system of farming might do where the land was newer and more productive than it is now. But we have got to take a little different course, or we shall all get into the poor-house together—there is no doubt about that."

"Nonsense, nonsense! the sile is the same now 'twas then, but the climate has changed some, and things winter-kill worse than they used to. But le's see, you must 'ev laid out mor'n a hundred dollars, fust and last, sense you begun this 'ere book-farmin' of yourn. You put a suller under yer barn fust, then you made some kind of fixin' under yer little-house, and now yer spendin' twenty or thirty dollars on a hen-house."

"Yes, the cellar under my barn cost me, reckoning time and all, very near a hundred dollars, and I consider it money well spent."

This conversation took place between two neighboring New England farmers of widely different views. Mr. Richards had a large farm of naturally strong but stony soil, which he farmed in the old-fashioned way. Mr. Gilman was a man of less means but more intelligence. He had begun to have some idea of a more sensible way of cultivating the soil than the skimming method. His farm and that of Mr. Richards lay adjoining. Mr. Richards was a very matter-of-fact kind of man—and anything that did not promise to bring an immediate return for its outlay was considered worthless by him. But imperceptibly to him, at first, under his system of cultivation, his farm was constantly running down. By degrees the hay crop sensibly decreased, and this rendered it necessary to reduce the stock, and this, of course, reduced the amount of manure for fertilizing the soil. What made the matter still worse, Mr. Richards continued to cultivate the same number of acres that he did when his lands were more fertile, and when he had more manure, too. Just so much land had to be "broke up," and just so much "laid down," every year, and the breaking up and the laying down did less and less good each year, for at each laying down the land became more compact and heavy, and having a greater tendency to hold the water from rains and snows on the surface, which, freezing there, injured or winter-killed the grass. And what really arose from the ignorance and mismanagement of Richards, himself, he attributed to the climate and to Providence.

This dislike to book-farming extended also to the improvements in the tools and implements of farming; his plowing, which was in fact only a kind of rooting, was done with the old-fashioned home-made plows, heavy, clumsy, and worse than worthless. The work after such plowing was work of the hardest kind. It was hard planting, and harder yet hoeing, and both consumed triple the time that should have been required, which made the work with Mr. Richards always behind-hand, though he worked and hurried early and late. By plowing too much, the plowing was not done till after the planting should have been done, and the planting was not done till after some part of the crops were suffering from neglect of hoeing; and before the hoeing could be done, the haying would be pressing, and so it went from the opening of spring to the closing in of winter. A farm managed in that way makes a slave of the proprietor and all connected with it, and after all, brings no satisfaction, but disappointment and vexation. Everything seemed to Mr. Richards to conspire to injure his prospects and blight his hopes. At one time everything was suffering from too much wet, and then everything was parching up from the drought, and what succeeded in surviving these evils the insects would beset or destroy.

The course of Mr. Gilman was very different. When he first began to make experiments and "improvements," he very naturally committed some "morus multicaulus" blunders, but he was even then, on the whole, a gainer. He soon discovered that farmers generally were committing one great blunder in attempting to cultivate too much land; that there was a vast difference between just skimming the surface and deep thorough cultivation, in the result. This very soon led him to place a proper estimate upon fertilizers, and to use every means in his power, to obtain them. He saw at once the wickedness and folly of throwing the manure of the stalls out-doors to be drenched by the rains and dried by winds till it was nearly worthless, and he set about making a good, warm, substantial cellar under his whole barn, into which the manure was to be thrown, and where by proper

absorbents all the liquid and more valuable parts of the manures could be preserved. By this, and other means already referred to, farmer Gilman increased both the quantity and quality of his manure heaps, and as he plowed no more land than he could plow well, and manure well, and cultivate well, his lands begun in a short time to manifest a very different state and condition from his neighbor's. When the plow was started it was thrust down into the soil, with a will, and and if a stone turned it out that stone was dug out, or sunk below the reach of the plow. A piece of ground plowed in this manner, could be planted and cultivated with less than half the time and strength required in cultivating a piece but half-plowed, and beside that, the unfavorable season had comparatively little effect upon the crops. If it was a wet season, the land was stirred so deep and left so open that the water descended easily and left vegetation uninjured; and if it was a dry season, then the roots of the crops could easily penetrate below the heat and drought, and seemed to flourish all the better.

A few years of such cultivation brought the tillage lands of Mr. Gilman into a good state of cultivation, and in proportion as success crowned his efforts, he became the more deeply interested in farming. Work with him was a continual pastime. His fields were his laboratory, and no alchemist ever pursued his studies and researches with more ardor and interest than Farmer Gilman tilled his farm. By plowing no more than he could plow well and dress well, he always had time to do everything well, and often found time to spare. Soon after he began this course he took advantage of his spare time to try an experiment in underdraining, of which he saw and read so much in his papers and periodicals. There was a place in the field near the house, of nearly or quite an acre, that, though it was not really low ground, was what farmers call "cold and wet," and for years had produced but little else than short species of brakes called polly-pod. It was a rough, hard, stony, unpromising-looking spot, and went by the name of "the hop-yard."

Upon this he determined to try an experiment in underdraining. The first few days' work upon the "hop-yard" was rather a poor show, and would have discouraged a less resolute spirit. One day, while at work, Mr. Richards happened along, and wanted to know "what 'pon airth he was 'bout there?"

"I'm trying to sink a blind ditch through here," answered Mr. Gilman, upon which Richards exploded in a broad yaw-haw at "sich nonsense."

"That's what ye call book-farmin', I suppose. Now 'tis right in the midst of plantin' time, and yer spendin' yer time makin' a ditch on high ground! What in natur do ye think yer comin' tu, neighbor?"

"I finished all my planting two or three days ago, and as it isn't hoeing time yet, I thought I would try an experiment."

"Try a 'speriment! fol-de-rol! you had better be plowin' and plantin'! 'taint too late yit, for what do ye think yer goin' to support yer family on next winter, with so little ground planted as you've got?"

"Well, we're in hopes to get along, somehow. Perhaps rather than see us suffer want, some of our neighbors would help us to a few bushels of corn, or a few beans, for charity."

"Not a kernel from me, I can tell ye. A man that'll fool away his time on sich a piece of land as that needn't look for help nor sympathy from me. All this nonsense comes of readin' them silly ag'cult'ral books. Now I advise ye to burn up yer books and go back to the old way of farming."

Having delivered himself of this piece of advice, Mr. Richards departed, more than ever confirmed in his dislike of book-farming.

For the New England Farmer.

LITTLE THINGS,

Or, A Walk in My Garden....No. 16.

While looking at a thrifty looking plum tree, I came to this conclusion: that the farmer should plant no more trees, whether few or many, than what he can take the best possible care of. Does not this rule apply to everything? Does not the net profit of farming depend on this principle? I leave the question for politico-economical farmers to determine.

THE CURCULIO.

I have succeeded in raising a good lot of plums by thoroughly syringing my trees with whitewash and kreosote. It was a real Sebastopol fight, but the big Jeffersons, McLaughlins and Imperial Gages look very tempting. I have never yet seen the black knot on my trees. The next year I propose to add a solution of glue to the mixture. While peeping out from under my trees I spied a neighbor's field dotted with

HAY CAPS,

which are with us no longer a matter of experiment. How beautifully they protect the wheat crop from sprouting. I believe that plenty of hay caps, a good barometer and a little attention to the weather, would, all combined with good judgment, do away with damaged hay and grain.

RADISHES.

Persons troubled with the radish worm may avoid them by sowing the seed in subsoil or nearly pure sand, and making use of liquid manure.

WOODPECKERS.

Politicians in this State are discussing the merits and demerits of the woodpecker. Before I was aware of this fact, one of them, who, by the way, is a good grafter, but possessed of a strong political bias, declared to me that woodpeckers did not attack our apple trees so much for the worms as for the sap. He said that the sweet trees suffered most. Will some woodpecker-ologist give us their experience?

THE CHUFA OR EARTH ALMOND.

This new vegetable seems to require but little attention, and may prove a favorite among the children.

APPLES

are scarcer than last year in Maine. Orchards that bore largely last year are nearly destitute of fruit.

CROPS GENERALLY IN MAINE.

It is believed that corn and potatoes are bet-

ter than for many years. Oats good. Rye and wheat very good. The weevil has done but little mischief in this vicinity. As I was returning from my walk I found

THE BARK CRACKED ON A PLUM TREE,

and the gum oozing out. Can this be remedied by slitting down the bark in the spring?

Yours, rather plumish, N. T. T.

Bethel, Me., Aug. 30, 1858.

HYMN OF THE HARVESTERS.

We gather them in—the bright green leaves,
With our scythes and rakes to-day,
And the mow grows big, as the pitcher heaves
His lifts in the sweltering hay.
O ho! a field! for the mower's scythe
Hath a ring as of destiny,
Sweeping the earth of its burden lithe,
As it sung in wrathful glee.

We gather them in—the nodding plumes
Of the yellow and bended grain,
And the flash of our sickles' light illumes
Our march o'er the vanquished plain.
Anon we come with the steed-drawn car—
The cunning of modern laws;
And the acres stoop to its clanging jar,
As it reeks its hungry jaws.

We gather them in—the mellow fruits
From the shrub, the vine and tree,
With their russet, and golden and purple suits,
To garnish our treasury.
And each has a juicy treasure stored
All aneath its tainted rind,
To cheer our guests at the social board,
When we leave our cares behind.

We gather them in—this goodly store,
But not with miser's gust.
For the Great All Father we adore
Hath but given it in trust;
All our work of death is but for life,
In the wintry days to come—
Then a blessing upon the reapers' strife,
And a shout at this Harvest Home.

TO MANAGE A REARING HORSE.

Whenever you perceive a horse's inclination to rear, separate your reins and prepare for him. The instant he is about to rise, slacken one hand, and bend or twist his head with the other; keeping your hands low. This bending compels him to move a hind leg, and, of necessity, brings his fore feet down. Instantly twist him completely round two or three times, which will confuse him very much, and throw him off his guard. The moment you have finished twisting him round, place his head in the direction you wish him to proceed, apply the spurs, and he will not fail to go forwards. If the situation be convenient, press him into a gallop, and apply the spurs and whip two or three times severely. The horse will not, perhaps, be quite satisfied with the defeat, but may feel disposed to try again for the mastery. Should this be the case, you have only to twist him, etc., as before, and you will find, that in the second struggle, he will be more easily subdued than on the former occasion; in fact, you will see him quail under the operation. It rarely happens that a rearing horse after having been treated in the way described, will resort to this trick a third time.—*British Sportsman.*

DELEGATES TO THE AGRICULTURAL SOCIETIES.

The following is a list of delegates appointed by the Board of Agriculture at its last meeting to attend and report upon the exhibitions of the various county agricultural societies:

Essex at Danvers.....Jabez Fisher, of Fitchburg
Middlesex at Concord.....George Marston, Barnstable.
Mid. South at Framingham.....M. P. Wilder, Dorchester.
Middlesex North at Lowell.....Wm. S. Lewis, Framingham.
Worcester at Worcester.....Wm. Sutton, South Danvers.
Worcester West at Barre.....Luke Sweetser, Amherst.
Worcester North at Fitchburg.....T. J. Field, Northfield.
Worcester South at Sturbridge.....J. C. Bartlett, Chelmsford.
Hampshire, Franklin and Hampden at Northampton, B. V. French, Dorchester.
Hampshire at Amherst.....George M. Atwater, Springfield.
Hampden East at Palmer.....Josiah White, Petersham.
Franklin at Greenfield.....C. G. Davis, Plymouth.
Berkshire at Pittsfield.....N. Durfee, Fall River.
Hoosatonic at Great Barrington....E. W. Gardner, Nantucket.
Norfolk at Dedham.....J. S. Grennell, Greenfield.
Bristol at Taunton.....C. Knox, Palmer.
Plymouth at Bridgewater.....Simon Brown, Concord.
Barnstable at Barnstable.....S. Bushnell, Sheffield.
Nantucket at Nantucket.....C. P. Tracy, Hinsdale.

For the New England Farmer.

EFFECTS OF THE SOIL ON PARTICULAR PLANTS.

"When scions are taken from a fruit tree and grafted upon stocks raised from seeds of that same fruit tree, will any advantage or detriment result from the practice, or is it simply immaterial?"

"In selecting a suitable soil for a fruit tree, should the ground be chosen with reference to the graft or to the stock?"

"Far East," *in New England Farmer, May,* 1858.

Mr. Editor:—It is well known that, when the seed of an esteemed variety of pear is committed to the soil, that seed does not produce the same variety, but a number of varieties, no two of which are the same, nor perhaps like any other variety of the kind that had ever been in existence. Such being the fact, it is easy to infer, even by the most inexperienced, that no advantage would accrue from the practice alluded to by your correspondent, and no deterioration whatever could arise from the use of such stocks more than from that of any other "free stock," which, in point of fact, they are. It is, therefore, "simply immaterial," and no more necessary than that the *Asphodel* should be planted in abundance, in and around our cemeteries, to supply the *manes* of the departed with food, in order to avert the terrible alternative of having hungry ghosts devour one another.

But it is of paramount importance that the stock should invariably be adapted to the soil. As a dry, siliceous soil for the free or pear stock; and a clayey, heavy, or moist soil for the quince.

This is what our standard pomological works would inculcate, when they describe different varieties as succeeding better on some soils than on others; that is, the varieties described as affecting certain specified soils, should be grafted on stocks naturally adapted to those soils rather than on any other.

The *rationale* of this is simple. We have but two differently constituted root-systems, or, in other words, two kinds of stocks to choose from—the pear and the quince. Also, by a little generalization, all kinds of soil may be resolved into two—the moist and dry, considering it without regard to its organic constituents, and chiefly as to its power of absorbing and giving off heat

and moisture; for through these agents principally, it acts on all vegetable tissue. In one of these soils, as already stated, the pear delights and luxuriates. The quince flourishes in the other.

It matters not, then, whether we adopt the system of Dochmahl, Knight, or any other of those pomological worthies; this general law must be observed, and cannot be departed from with impunity; modified it may be, to suit the exigences of locality, or climate, or both; but still regarded as the basis of operations, the main spring of action, the fundamental principle of pear cultivation, and the chief source of ultimate success; and so long as the pear and quince are adopted as stocks, the soil on which they are planted must approach as nearly as possible to the character of their respective *habitats*, particularly in the porousness or tenacity of its texture. THOMAS F. WALSH.

Boston, August 23, 1858.

For the New England Farmer.

CAN MOWING MACHINES BE WORKED WITH OXEN?

I wish to inquire if mowing machines have ever been successfully worked with oxen, and if so, which machine operates in that way the best?

Will it not require two men to work the machine, one to drive the oxen and another to manage the mower? I have heard of having oxen bitted so as to drive them like horses, but I think they would be apt to prove a rather hard-mouthed team; at any rate, I should not like to risk the machine until the oxen were pretty well broken to the bit.

I have thought some of getting a mower, provided this and some other objections can be overcome. I have long thought that an ox machine would be more useful to a majority of farmers than a horse machine, as the larger part keep only one horse, preferring to do their work with oxen; even if they had a one-horse machine, it would be too hard for a horse to mow during the forenoon; and then rake in the afternoon, besides being often wanted on the road.

Lancaster, Aug., 1858. OLD SUBSCRIBER.

REMARKS.—Mowing machines are often used with oxen, but we do not know which is best to be worked by them especially.

For the New England Farmer.

SAVE YOUR ASHES.

The *Germantown Telegraph* contains sensible remarks on the prevention of the potato rot, by the use of ashes or other alkaline substances. I have seen nothing more to the point. It is a remedy at the command of all. The application of a pint of ashes to each hill at the time of planting, or at the time of first hoeing, will not harm the potato, if it does not entirely save them from rot. I have great faith in the fertilizing power of good ashes, and believe they are worth more than they are commonly estimated at. Many of our most valuable products are made such by the application of ashes. And if they are found to be a specific remedy for the potato disease, which I believe to proceed from evil atmospheric influence, this will greatly enhance their value.

Although the Chenangoes are so far used up, as to be not worth digging, and some other varieties are badly affected, the Davis Seedling continues fair and bright, well rewarding those who were vigilant in obtaining the best of seeds.

I have seen of late a patent potato-digger, made by the Messrs. ALLEN, of New York, which promises to be a convenient and useful implement. If it shall prove to do as well as their mower has done, it will be worth having.

Sept. 1, 1858.

EDDY'S PATENT SELF-FEEDING STALL FOR HORSES.

It is an important item in farm economy to arrange the places where animals stand, lie and feed, so that there shall be comfort to themselves, convenience to the persons attending them, and no waste suffered in their racks or mangers. We have never yet seen a lean-to, or tie-up, for cattle, that we thought was in every particular right; and we never saw a horse-stall until to-day, that we could find no fault with.

Dr. EDDY invited us to-day to look into the "Club Stable," near the Revere House, Boston, with him, and see his stalls. We did so, and from our examination, are enabled to use the expression made above, that *we have seen a horse stall that we could find no fault with.* The Dr. states that by the above-named invention the following results are secured, and we pretty nearly believe all he says, viz.:

1. A horse may be fed without soiling his head or foretop with hay-seed or other matter.

2. He cannot breathe upon his hay, or soil it by constant mouthing, as in a common rack or manger, and thus render it unfit for use.

3. He can receive his hay *no faster* than it is taken away and eaten.

4. He cannot thrust his nostrils into a mass of smoky hay.

5. *He cannot waste a particle of his food.*

6. The stall is abundantly ventilated.

7. The cost of construction is less than the cost of the common rack and manger.

8. After the removal of the common rack the above improvement may be substituted in any stall at a very trifling expense.

9. The value of an individual right may be saved *annually* in the feeding of a single horse.

With the advantages which this improvement presents, there is no longer an excuse for a wasteful and slovenly method of feeding horses. *Greater simplicity, greater economy* and *greater neatness* can hardly be conceived than are realized by this invention. The individual who keeps a single horse *cannot afford* to do without it.

We advise every lover of a good horse to call and see these stalls.

For the New England Farmer.

BOOK-FARMING.

BY ICHABOD HOE.

Mr. Gilman made his beginning upon the hop-yard in the hardest part, but after the first few days' work, made much better progress, and before he finally got through with it, the hop-yard looked like a new creation. All the stones on or near the surface were needed in the drains, and many others were drawn from a large stone heap on one part of the field, which had grown, by the annual accumulation of years, to quite a mound. A single year was sufficient to convince Mr. Gilman that the labor upon the hop-yard was by no means lost. The second year it was no light job to draw a scythe through the tall, rank timothy and clover, that grew where before only worthless hassock and brakes had been found, and the acre which then had produced less than a ton of bedding hay, now produced more than two tons of the first quality.

This was a result quite beyond the anticipations of Mr. Gilman, and those parts of his fields which heretofore had been but eye-sores to him, he began to regard with much such feelings as an enthusiastic surgeon does a fracture or other wound, which gives an opportunity for the exercise of his skill. By being careful to obtain the best implements for use on the farm, and taking advantage of every improvement and invention for saving manual labor that came within reach of his means and circumstances, Mr. Gilman both lightened the labors of farming, and gained time to make great improvements upon his lands.

"Want to hire fifty dollars, du ye? It's jest as I told ye, this 'ere book-farmin's jest runnin' on ye inter the ground. What 'pon airth ye want fifty dollars for, neighbor Gilman?"

"I'm going to buy a mower and reaper that works by horse-power."

"What! goin' to give fifty dollars for one of them foolish consarns?"

"It will cost nearly a hundred dollars!"

"Hurderd dollars! why, yer crazy! I jest thought you'd come to that, readin' so many of them foolish ag'cult'ral books. I wonders ye haint in the poor-house 'fore now, layin' out so much for every kind of a notion that comes along—new-fashioned harrers and cultivaters, hay-cutters and sich things, and now ye'r goin' to throw 'way a hundred dollars on a mower for that 'ar little farm of yourn!"

"Perhaps some of my neighbors may want to hire it once in a while."

"Ye needn't make any calc'lations of that sort on me; I wouldn't have one of the foolish things on my farm."

"Did you ever see one?"

"No! nor don't want tu—they're only jest got up by them, crafty fellers that wants tu git their livin' by their wit, and git sich foolish folks as you are tu buy their good-for-nothin' inventions."

"You've been laughing at my foolishness, as you call it, but somehow, I have managed to raise more corn, more oats, more wheat, and more hay, too, than you have, with less than half the labor you have bestowed on yours.

"Wal, I know my crops has been purty light for a year or two past, but it's owin' tu the seasons—one was dry and the next was wet. These things is above our control, ye know."

"We can't control the season, to be sure, but these foolish notions of mine that you've been laughing at, have enabled me to raise good crops in wet or dry seasons, either."

"You may make your farm du so, but taint the nater of my land."

"It isn't owing to the nature of the land, as much as it to the nature of the cultivation. When I began upon my present system of cultivation, there wasn't any difference between my farm and yours, only in size. As you say, I don't think there is much danger of your using a mower on your farm, till you have got the surface a little smoother, and freer of rocks and stones than it is now."

"Wal, my farm is jest as nater made it, and I aint to blame for that, and my father was a good farmer, and he never heern of sich a thing as a cultivater, nor never dreamed of sich a thing as a mower; and I b'leeve it's all nonsense tryin' tu use one. Better save yer money for suthin' else. I haint got s'much money by me's I use tu have. These 'ere bad seasons has spiled my crops, and one thing or 'nother has took off a good deal of my loose change. I 'spect I've got suthin' like fifty dollars, and I 'spose if I don't let ye have the money, ye'll git it somewhere else, so I's goods let ye have it 's any body."

"Yes, I shall get it somewhere. But, Mr. Richards, why don't you take better care of your apple trees, and not let them die off so?"

"Me let 'um die! You talk as if you had power to control Providence. I 'spect trees must die as well as folks. These 'ere hard winters kills everything, and the apple trees 'mong the rest."

"Winter kill an apple tree! Why, an apple tree is as hardy as an oak tree! The fact is, Mr. Richards, if you had spent a dollar or two a year for a good agricultural paper, and taken ten minutes a day, or even two minutes, you would have found out what ailed your apple trees, and could have saved them healthy and sound. You wont have twenty bushels of good sound fruit in your orchard this season."

"No, they bloomed well, and the fruit sot harnsome, but, somehow, the fruit's all fell off. Wal, but what 'spect 'tis ails the trees, if 'taint the winter kills 'um?"

"Why, just come here, and I'll show you; if you'll just poke away the grass you'll see around this tree, close down to the ground, what it is."

"I don't see nothin' but the chankins the worms has made in the rotten wood."

"Ah, that's the very mischief. The borers have bored your trees into honeycomb, and the trees have died in consequence of it, and no wonder at it. See here, while I take this sprout and strip off the leaves! I'll show you how to dispose of the fellow that made this hole. There, you see by the end of the stick, that that has put a stop to that fellow's operations."

"Wal, now, that beats all, I vum! who'd a thought it!"

"Why, anybody that takes those foolish agricultural books would have thought of it, for there is a great deal said about the apple tree borer in them, and full directions given how to get rid of them. I have single trees in my orch-

ard, this year, that will bear as much as twenty bushels of marketable apples each. I've been offered three hundred dollars for my apple crop this year, with the privilege of reserving what I want for family use."

"Du tell! three hunderd dollars!"

"Yes, and I think that that will pay pretty well for agricultural books and papers for a spell, and for all the time spent in reading them, too, for if it hadn't been for them, I should have been as ignorant of what ailed the apple trees as you were, and mine would have gone the same way, too. Now I've got some trees that will bring in, one year with another, as much clear income as two hundred dollars would at interest, and I'm not afraid of my income's being cut off by the failure of all the banks and railroad companies in the country."

"Hang these 'ere companies! I've lost suthin' by 'um fust and last, but they wont git no more of my money, for if times don't change, I shan't have much left. I tell ye what, neighbor Gilman, I guess I shall go to work and take care of my trees, and kill off them 'ere borers. We'll go up to the house, and I'll git ye the money."

[It appears by the above that Mr. HOE has not *hoed his row out yet*, and as the work is very well done as far as he has gone, we hope he will be diligent in well doing until the job is fairly completed.]

For the New England Farmer.

A NEW FRUIT TREE PROTECTOR.

An invention has lately been brought into notice by WM. W. TAYLOR, Esq., of South Dartmouth, which bids fair to supply the want of what all tree and fruit cultivators have most sensibly felt the need of, namely, a reliable protector from the ravages of the canker worm and other destructive insects, of which there are in Massachusetts alone, according to Dr. Harris, no less than 4800 species.

This invention consists of a circular iron cup cast in two semicircular sections, with flanger and screws so moulded as to be perfectly water-tight when joined together. Between the cup and the tree a packing of sea-weed, straw, or any other suitable material, is placed sufficiently tight to prevent the passage of insects. An umbrella-like screen is suspended about two inches above the cup, which prevents the accidental lodgment of leaves. The cup is then filled with bitter water which will not freeze in the coldest winter, and being deliquescent, will not evaporate. This circle of bitter water around the tree is an impassable barrier to every insect. A friend of mine invited me a few days since to drive over and see the operation of these cups in his orchard. I was surprised to find that though the cups had been placed on the trees only a few hours, that they were half filled with canker worms and other geometræ, and any quantity of aphides.

Some of these worms appeared to be pretty sensible fellows in the main, for great numbers having climbed to the edge of this gulf of distruction, had wisely adopted the policy of a *masterly* inactivity, and had gone into winter quarters; hoping, perhaps, like Micawber, that something would turn up in the spring; and they had wisely suspended themselves in cocoons, like so many barnacles, on the iron cup and trunk immediately beneath. There they hung like so many monuments of *misguided* ambition. Now when these hatch, the young having no nourishment, must die of famine. The canker worm, which is the especial pest of our northern orchards, ascends the tree in the fall, and during the mild spell of a moderate winter, and laying about sixty eggs, drops into the ground and dies. This new swarm hatches in due time, and when it is too late to apply a remedy, the farmer finds his orchards blighted, and his hopes of a good fruit season destroyed.

This invention of Captain Taylor completely heads them off, as these cups of dead worms and cocoons beneath show, and if applied in the early fall, they act as an efficient insurance against their insidious attacks. Many farmers in this vicinity have tried it, and are thus far more than satisfied with the result. Look out for a large fruit crop from old Dartmouth next year.

New Bedford, 1858. AGRICOLA.

URINE.

Some years since, an experiment was made in Flanders, which went far towards ascertaining the value of urine when applied as a stimulant of vegetable life. A box of fine, white sand was exposed to a heat sufficiently intense to dissipate its moisture, and thoroughly to destroy every particle of organized matter it contained. It was then placed in a dry situation, and some seeds of Egyptian wheat being planted in it, the whole mass was saturated with urine in a state of incipient putridity. The result of this experiment was that the wheat vegetated, grew rapidly through the season, and in autumn, rather before the maturation of the same grain in the open fields, produced a heavy yield of fine and perfectly developed grain.

Of cow's urine, according to analysis of BRANDE, contains in 100 parts:

Hydrochlorate of potass and ammonia	1.5
Sulphate of potass	0.6
Carbonate of potass	0.4
Phosphate of lime	0.3
Urea	0.4
Water	96 8
	100.0

Urine of the horse, analyzed by Vauquelin, gave:

Hydrochlorate of potass and ammonia	1.5
Sulphate of potass	0.6
Carbonate of potass	0 4
Phosphate of lime	0.3
Urea	0.4
Water	96.8

Most farmers are now so well convinced of the value of liquid manure, that they take more pains than formerly to preserve it. They have not only placed cellars under their barns, where it falls, when dropt, upon meadow muck, saw dust, loam, refuse hay, leaves, or other matter, where it is soon absorbed and saved from evaporation,—but

some have sunk tanks, or wells, into which it is led by gutters, and after passing through the putrefactive process, is conveyed to the fields and sprinkled upon grass or other lands as it is needed.

This process is highly commended by some who practice it. It seems to us, however, that where meadow muck is abundant on the farm and there are high lands of sandy or gravelly loams that need dressing, that a cheaper, easier and more beneficial way would be to let the droppings fall upon old, finely-pulverized meadow muck. This not only absorbs all the urine, holding its virtues most tenaciously within its grasp, but every cord of muck applied to such lands as we have mentioned is nearly equal in value to a cord of the common barn-yard dung.

Sir John Sinclair, an English writer of celebrity, speaking of the value of this article as a fertilizing agent, says:—

"Every sort of urine contains the essential elements of vegetables in a state of solution. The urine of a horse being so much lighter, would be more valuable than its dung, if both must be conveyed to any distance. The urine of six cows or horses will enrich a quantity of earth sufficient to top-dress one English acre of grass land; and as it would require 4*l.* worth of dung to perform the same operation, the urine of a cow or horse is worth about 12 shillings per annum, allowing 8 shillings per acre as the expense of preparing the compost. The advantages of irrigating grass lands with cow urine almost exceeds belief. Mr. Harley, of Glasgow, who keeps a large dairy in that town, by using cow urine, cuts some small fields of grass six times; and the average of each cutting is 15 inches in length."

For the New England Farmer.

NEWLY FOUNDERED HORSES.

Mr. Editor:—Having had considerable experience with foundered horses, I will give a condensed account of one case through your paper. When but a youngster, and inexperienced, I drove a horse rather hard, and perhaps gave him water too soon, and fed rye bran at night. Whether it was the water, the hard driving or the unaccustomed feed that stiffened the horse, I am unable to say; but in the morning he fell in coming out of the stable, and was unable to use his limbs. I called a horse-farrier, who said he could cure the horse, but should keep secret what he did unless I would give him ten dollars for the knowledge of his mode of treatment. I told him if he cured the horse I would give him a private receipt that was valued at fifty dollars, that would be very beneficial in his business. This he accepted, and went to work. He first gave the horse all the salt he would eat, saying that if he did not eat freely he should dissolve some and turn it down. He next bled in the warts upon the forward legs, having pealed them down thin and oiled them. The bleeding was performed by my holding up one foot, while he pinched the wart upon the other leg with his thumb and finger, then running a small, sharp knife-blade into the middle of the wart and up under the skin and upper part of the wart, about one inch and a half, taking care not to touch the inside skin over the bone. He did the same to both legs. There was but little blood came from either. We next commenced rubbing the legs and moving the horse about, and as soon as he thought he would not fall we put him before the wagon and started off upon the road. As soon as he began to warm up he improved rapidly, and by the time he had gone six or eight miles he went as well as ever he did, and never after showed any signs of founder. Dux.

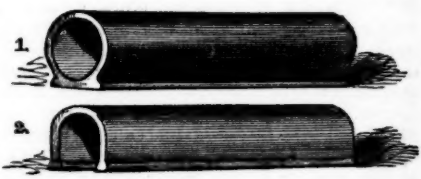
Plainfield, Aug., 1858.

For the New England Farmer.

UNDERDRAINING.

Various materials have been used in drains for conduits, but none with such success and at so small cost as the pipe-tile. All other kinds are more liable to be stopped by roots of trees, burrowing of small animals, washing in of earth, gulleys worn in the bottom, breaks in the continuity, &c., &c. The expense of tile drains is much less than those formed of any other material, unless more is paid for the transportation of tile than their original cost at the manufactory.

The process of tile manufacture is as follows: after the clay has been properly ground it is shoveled into the tile machine and pressed out, by a piston worked with screw or cogwheel, through dies formed in the shape required for the tile, and run off on canvassed rollers, three or four side by side, in lengths of five or six feet; these strips are cut into the proper lengths, usually fourteen inches, by the single act of lifting a frame, to which wires are attached at small distances, which cut through the soft clay, and leave the tiles ready to be carried away to dry for burning; when sufficiently dried, they are placed on end, in a kiln made for the purpose, and fire applied until they have acquired about the color of good, red brick. Tiles are now furnished in Boston at the following rates:



Sole or pipe tile, in form as figure No. 1:

1¼ inch	$10,75 ℔ M.	3 inch	$21,50 ℔ M.
2 inch	13,25 " "	4 inch	34,25 "
5 inch	$48,50 ℔ M.		

Horse-shoe tile, in form as figure No. 2:

2½ inch	$13,50 ℔ M.	3½ inch	$17,00 ℔ M.
5¼ inch	$33,50 ℔ M.		

For sewers of small size, or for drains exposed to the action of frost, and for conducting pure water, the vitrified stone ware drain pipe is used with great success; it is made of the best material, and is entirely proof against all corroding agents. This pipe is very different from the

red clay socketed and glazed pipe often seen, being formed of Jersey stone ware clay, well ground and pressed through a strong machine at an expense of great power, and burned in the kiln until vitrified; it is also glazed in the kiln by vaporized Liverpool salt when the pipe is at a white heat. These pipes are sold in Boston in two-feet lengths at the following prices:

No. 1, plain Pipe. No. 2, Double Joint. No. 3, Elbow.

2 inch, socketed.....11c ℔ ft.		6 inch, socketed.....30c ℔ ft.	
3 inch, " .....14c ℔ ft.		8 inch, " .....45c ℔ ft.	
4 inch, " .....17c ℔ ft.		9 inch, " .....56c ℔ ft.	
5 inch, " .....23c ℔ ft.		12 inch, " .....90c ℔ ft.	

Elbows and double joints, double price per foot. The manufacturers of this article will make any shape or size to order; on account of the ease with which this material can be worked, it can be adapted to many useful purposes on a farm; one of which is in making "peep holes," by which to examine tile drains. Another very useful purpose is in conducting spring water to the house and barn, for which is used a pipe of one inch bore in two feet lengths, with separate collars. This size is sold at 6 cents a foot, including collars. It is capable of bearing the pressure of 150 feet head of water.

No. 1 represents the Pipe. No. 2, the Collar.

This form, viz., the cylindrical pipe with collars, is, undoubtedly, the best for pipe tile, to be used in underdraining. It is in extensive use in England, and its manufacture is now begun in this country.

Water can get into the pipe-tile very freely at the joints, as may be seen by a simple calculation. It is impossible to place the ends so closely together, in laying, as to make a tight joint on account of roughness in the clay, twisting in burning, &c., and the opening thus made will usually average about one-tenth of an inch on the whole circumference, which is, on the inside of a 2 inch tile, 6 inches, making six-tenths of a square inch opening for the entrance of water at each joint. In a lateral drain, 200 feet long, the tiles being 13 inches long, there will be 184 joints, each joint having an opening of six-tenths square inch area, —in 184 joints there is an aggregate area of 110 square inches; the area of the opening at the end of a 2 inch tile is about 3 inches. 110 square inches inlet to 3 inches outlet; 37 times as much water can flow in as can flow out. There is, then no need for the water to go through the pores of the tile, and the fact is, I think, quite fortunate, for the passage of water through the pores would in no case be sufficient to benefit the land to much extent. I tried an experiment by stopping one end of an ordinary drain pipe, and filling it with water; at the end of 65 hours water still stood in the pipe, three-fourths of an inch deep.

How large an area a certain sized pipe will drain is a question into which enters a great many elements; among which are the following: Amount of rainfall, per centage of evaporation, perviousness of the soil, amount of drainage area beyond that occupied by pipes, amount of fall which can be given to the drain, friction of water with inside of pipe. It will be seen at once that it is impossible to lay down an arbitrary rule for all cases, though the area may be determined for each case by itself. The practice of extracting the square root of the drainage area in acres, to find, roughly, the diameter in inches for the main drain of any system, has been used in England. The rainfall there is about two-thirds the amount in New England, but the amount of evaporation here is double the amount there. Again, in England the fall of one inch, vertical depth, of water would be considered a great rain; here a rainfall of three or four inches, vertical depth, is not uncommon. Other things are different in the two countries, so that the rule if safe in England might not be so here. In the average of conditions in New England, I think the addition of one inch to the result obtained by the English rule would give a good diameter of pipe for the work; for instance, suppose 9 acres are to be drained, square root of 9 is $3 \times 1 = 4$. 3 inch pipe to drain 9 acres in Old England, 4 inch pipe to drain 9 acres in New England; but this result is by no means safe for all cases.

If space permitted, I would show, by calculation, what amount of water certain sizes of pipe, under certain conditions could discharge. I will give one result with a 2 inch pipe having the least fall at which it is likely to be laid—i. e., 3 inches fall in 100 feet—velocity 0.895 feet per second—will discharge eleven thousand four hundred gallons a day. J. HERBERT SHEDD.

Boston, Sept. 14, 1858.

For the New England Farmer.

FARMERS' SONS AS SCHOLARS.

MR. EDITOR:—For proof of the fact that the laboring classes are endowed with an intellect of a superior order, and that labor strengthens and develops the mind, we have but to go into our colleges and seminaries of learning, and tell me if you please who stands first in scholastic degree among his fellow-students, not only first in his class, but also in the literary society to which he belongs? And also first in the estimation of his instructors, and first in the love of all his classmates? Is it the youth who has grown up from infancy to manhood without ever feeling that industry was an essential part of his education, without feeling that he must needs labor for a livelihood without ever knowing by experience the truth of the injunction, "In the sweat of thy face shalt thou eat bread?" Is it the child of wealthy parents who have spared neither pains nor expense in the perfection of his education, who have afforded him every facility possible in the way of books and private instructors, and have carefully trained him along the beaten path of learning, from the primary school up to the very doors of the college, and who take care

that he shall not want for means to satisfy both his physical and mental wants? Is this the youth who is to come off victorious in the strife for collegiate honors among his fellows? By no means. Ten chances to one if it is not some humble farmer's son or some charity student who during the whole course of his studies has had to struggle against almost every difficulty; who has been pinched for means to satisfy his necessary wants, both physical and mental. He studied because he loved to study, because he felt the value of learning; while the son of luxury studied because he was driven to his books, because the pride of his parents required that he should receive the form of an education, if nothing more.

And the difference does not end here; if the son of luxury cannot sustain himself even in college, as he advances in life we behold a still greater disparity between him and the son of toil; the former having received his diploma, uses it as a passport to success and as a letter of introduction to refined and intellectual society. The luxurious and effeminate habits which he acquired during his youth are rarely to be shaken off; they, on the contrary, increase in strength and intensity, and incapacitate him for usefulness of any kind whatever, and the succeeding generation buries him and his deeds beneath the wave of oblivion.

The son of toil lays his diploma aside, and goes to work as though he had it not, and is judged according to his merits by the ages yet to come.

I hope the day may come when our farmers and laborers shall rank first in point of education among the people of the land; when every farmer shall not be afraid to compare his education with any college graduate. Then will labor really be honored, and our laborers be truly our nation's strength, the safeguard of our liberties and our country's pride. Euler Norcross.

South Hadley, 1858.

THE ANTHRACITE COAL TRADE.

Thirty-one years ago the first coal went to Philadelphia, being ten wagon loads hauled over the mountains by George Shoemaker, of Pottsville. Very few persons could be induced to purchase it, and most of these were wholly unsuccessful in their attempt to make it burn. Everybody considered it a mere stone. Mr. Shoemaker was denounced in all quarters as a cheat, and measures were being taken to arrest him for swindling; but he escaped arrest by leaving the city by a circuitous road, and did not stop until he had got thirty miles on his homeward journey. The most remarkable feature in this extraordinary speculation was, that Mr. Shoemaker did not himself know how to make the coal burn. He was therefore unable to convince the public that it really would ignite. Had he experimented at home, and brought with him a grate or stove in which to kindle a successful fire, the exhibition would have, no doubt, hastened full ten years the development of the coal business. He reached home disgusted at the belligerent temper of the citizens, and heart-sick at the ill success of his adventure. His reputation as an honest man was rescued, however, by an iron master in Delaware county, into whose hands some of the repudiated mineral accidentally fell. He tried the coal, caused it to burn freely with an intense heat, and was so pleased with it that he proclaimed the fact in the newspapers. This led others to try, and they also succeeded, the prejudice was removed, and consumption went on from this disastrous beginning, until it last year reached the enormous quantity of 3,476,862 tons. But up to this date the depression of manufacturing has caused a reduction of 300,000 tons to be sent to market, and the whole year undoubtedly shows a falling off of full 600,000 tons.—*Miner's Journal.*

For the New England Farmer.

OLD FASHIONED BUTTER STOCK.

Forty years ago, a cow that yielded two pounds of butter a day, with a little cream for the table, was looked upon by such men as Lowell, Derby and Parsons, as extraordinary, and worthy of special admiration. From six to eight quarts of her milk were said to have produced a pound of butter. Now we hear of animals being bred to order, that will produce double the quantity of butter, from the same quantity of milk. I have never met with such animals, nor have I ever met any well attested statements of such products.

As the season for shows is near at hand, it is well to recur to first principles, and to guard against being misled, by cunningly devised fables of any kind. When I meet with a cow that does as well as the one first mentioned, I am satisfied she is a good cow, whatever may be her breed, and I doubt whether any of the fancy stocks will do better.

LETTER FROM MR. BROWN.

A DAY ON THE STATE FARM.

Westboro', Mass., Sept. 1, 1858.

Dear Sir:—Business, as well as inclination, leads me to various portions of our good State, and occasionally into other States, where I mingle freely with the farmers, observe their practices, stock, crops, modes of living, &c., and get new facts and new courage myself as co-workers in the progress of rural art. I have passed today on the *State Farm*, in this town, and it is an interesting day's work to look at the improvements which have been made upon it, at the stock and crops, and the school of reformation which is established upon its grounds.

The farm is managed by the State Board of Agriculture, under the superintendence of Dea. Samuel N. White, a gentleman of large experience in agricultural matters, of sound judgment, and strongly imbued with the spirit of progress and improvement.

The farm consists of 285 acres, divided into 80 acres of plowable or tillage land, 36 of natural mowing, or meadow, 40 of woodland, including 19 acres of swamp, and about 129 acres of pasture land. The soil is varied, some of it being light and sandy, probably once covered with a

heavy growth of pines, while other portions are of granitic formation, and now so filled with rocks as to make it nearly worthless for purposes of cultivation; the natural mowing and swamp lands will only become valuable for cultivation when they can be thoroughly drained and reclaimed.

I found the crops generally appearing well, and, all told, there were a good many acres under cultivation; such as 19 acres of corn, 4 acres of fodder corn, 13 acres of potatoes, 10 acres of carrots, beets, and other roots, 3 acres of beans, and 4 acres in garden, covered with onions, cabbages and other vegetables. I also found that the farmer has harvested 10 acres of oats, 5 acres of winter rye, 2 acres of wheat, 1½ acres of barley and 2 acres of millet, all of which were of the first order of crops. One hundred and three tons of hay, all weighed, has been cut and secured, and there is a present promise of a considerable second crop. The farm affords a variety of fruit, and I have seen to-day in my rambles over it, the finest crop of peaches and pears that I have met with this season. The high lands seem admirably adapted to the apple, several varieties of the pear and strawberries, and I am sorry not to see more attention given to the cultivation of the apple, where there is such a demand for them as is presented in the watering mouths of five or six hundred boys! The institution on the farm is not a *penal*, but a *reformatory one*, and I know not how a wild and untutored boy can be brought under submission in any better way than by the kindness he receives within those walls, accompanied with a proper supply of wholesome fruit! If the officers of that institution have learned that kindness is better than stripes, the progress of inquiry would satisfy them that an abundance of fruit in their hand would become first a *tamer*, and then a *civilizer!*

In looking at the stock belonging to the farm, I found 12 noble oxen, 25 cows, 5 horses, and an Ayrshire, Hereford, and Alderney bull, each being a full blooded animal, together with 8 head of young cattle; in all, 54 head. Among them are the Hereford, Durham, Ayrshire, Devon and Alderney stock. In the capacious and convenient piggery, I found 105 swine, many of which were of fine form, and most of them of Suffolk and Mackay blood. Since the farm has been managed by the Board of Agriculture many valuable improvements have been made upon it, some of the most important of which, such as draining with pipes and stones, and the removal of vast quantities of boulders and imbedded rocks from the fields contiguous to the highway, cannot be appreciated by the beholder unless favored with the lucid descriptions of Dea. White or some one who witnessed the operations of improvement. I saw one field containing several acres, originally one of the roughest and most forbidding of our New England pastures, that had been trenched to an average depth of 12 inches, and a large portion of the rocks buried, so that the trenching in many places was three or four feet deep. This land is now covered with fine crops. The intention is to appropriate it to apple trees. This trenching, as well as a large proportion of the other work on the farm, is done by the boys from the school, who labor in gangs, or lines, directed by overseers who work with them, and lead the way.

But what means that solemn peal from the great bell in the East Tower? It is

A FUNERAL FROM THE REFORM SCHOOL.

The officers and ladies of the household, and the boys from their avenues, all turned to the Chapel in the centre of the vast pile of buildings, and when I entered, were seated. In front of the chaplain, and directly before the boys, was the coffin containing the body of a little boy only ten years of age, who had suddenly died of heart disease. The silence of this impressive scene was broken by the voice of the chaplain, who said, "we will chant the 23d Psalm," and then, led by an instrument and the firm and manly tones of his voice, in subdued utterance they chanted with touching pathos—

"The Lord is my shepherd: I shall not want.
He maketh me to lie down in green pastures:
He leadeth me beside the still waters.
He restoreth my soul: He leadeth me in the paths of righteousness for His name's sake.
Yea, though I walk through the valley of the shadow of death, I will fear no evil: for Thou art with me; Thy rod and Thy staff they comfort me.
Thou preparest a table before me in the presence of mine enemies: Thou anointest my head with oil; my cup runneth over.
Surely goodness and mercy shall follow me all the days of my life: and I will dwell in the house of the Lord forever."

A brief description of the deceased, his sickness, and death, and a short and fervent prayer, which seemed to find a beating chord in every heart, closed this part of the service. The boys, all barefooted, for the weather was hot, then noiselessly filed by the coffin and took a parting look at all that remained to them of their late associate, so suddenly and unexpectedly taken from their midst. Well might they exclaim in the feeling language of Grey—

"One morn I miss'd him on the accustomed hill,
Along the heath, and near his fav'rite tree:
Another came; nor yet beside the rill,
Nor up the lawn, nor at the wood was he."

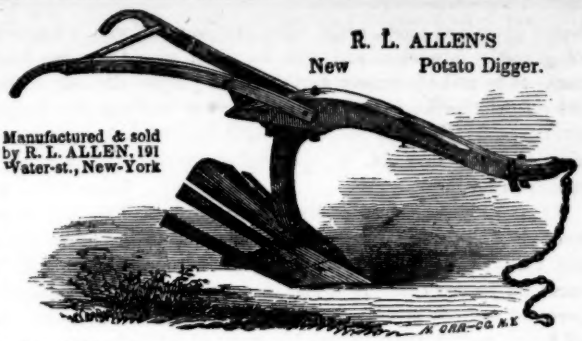
Headed by the bearers, and bier, and followed by the Trustees of the School, who happened to

be there, the 560 boys, the ladies connected with the Institution, and its officers, the procession moved silently along to the shores of a beautiful pond in the centre of the farm, where there is a cemetery laid out in excellent taste. A receiving tomb has been prepared in the steep hill-side, and over it, and along the slope of the hill, young oaks stretch their friendly branches, and sing their requiems over the dead. The bier was set down, the boys arranged eight deep in lines on the margin of the pond, while visitors, officers and ladies stood upon the higher ground over the tomb. The chaplain, his wife and one of the officers sang an appropriate hymn, their rich, full tones rolling over the water and returning in sweet echoes, seemed to bear all our souls into a heavenly world. One of the bystanders then spoke of death, saying that although it is a solemn thing to die, yet, as it is an ordinance of God, it is for our best good, and that slavish fears of it should not mar the rational enjoyments of life; he spoke of the regard which all good people have for age and for their dead,—of the great improvements and the refined taste which has been manifested in the preparation of places of burial, and expressed a hope that the spot, now for the first time occupied, would become an object of their interest and clustering affections, and be beautified by their skill and care. He spoke of the last Sabbath lesson of the deceased, which was among the latest injunctions of the apostle, to "*Love one another*," and told them, if it was sincerely obeyed, that the grace of God would stream into their hearts as His beautiful sunlight was then streaming into that sacred and quiet spot, and prepare them to meet death in calmness and peace. A short and expressive burial service, and a fervent prayer of few words closed one of the most impressive funerals that I ever attended. Heavy clods falling upon the coffin, gave evidence that dust was committed to dust, and that life's fretful fever with the occupant of that narrow house was over. I turned from the scene with subdued feelings, and pondered upon life's sorrows and joys as I watched the last rays of the sun sink away from my sight.

Very truly yours, SIMON BROWN.

JOEL NOURSE, ESQ., BOSTON.

FINE PLUMS.—We find pleasure in the acknowledgment of a box of fine Drap d'Or Plums, from the garden of E. C. PURDY, Esq., of Somerville. Mr. Purdy's skill in the garden, as well as his teachings through these columns, are worthy of attention.



ALLEN'S POTATO DIGGING PLOW.

We have already an implement for cutting, dropping and covering the potato by horse power, and implements for cultivating and hoeing them. Now we have before us an illustration of one for *digging* the potato, and as the latter operation is a slow, back-aching process, the digging plow will be hailed with pleasure, if it proves to be really a practical implement. We have not seen it in operation, but incidentally learn that it has given such satisfaction as to cause a very considerable demand for them. In a circular before us, Mr. Allen says:—

"This implement weighs only 85 pounds, is of light draft and simple in construction. A pair of small horses or oxen, with a lad to drive, will easily dig potatoes as fast as twenty men can pick up. It turns them out so clean that scarcely one bushel in fifty, whether small or large, is left uncovered. This is a most important advantage. The standard is so high as to allow of its working freely without clogging from weeds and potato vines. It works well on side-hills, in all soils, and among stones and stumps.

DIRECTIONS FOR USE.

1. Gauge the clevis so that the plow share will run directly under the potatoes. Keep the point of the share as near the centre of the hills or row as possible. The soil and potatoes are by this means turned completely over, leaving the latter on the top.

2. If the vines are long and green they should be cut with a scythe within six inches of the ground; or what is much cheaper and quicker, drag them with a dull iron harrow, and then dig with the plow. When the vines are dead, cutting is unnecessary.

3. If the soil is a stiff clay or somewhat wet, the potato digger may work better with the centre prong or arm taken off, or with a narrower one, which I can furnish to order, or any blacksmith can make."

Sold by R. L. Allen, 189 Water Street, New York. Price $10.

OPPOSITION.—"A certain amount of opposition," says John Neal, "is a great help to a man." Kites rise against the wind, and not with the wind; even a head wind is better than none.

No man ever worked his passage any where in a dead calm. Let no man wax pale, therefore, because of opposition; opposition is what he wants and must have to be good for anything. Hardship is the native soil of manhood and self-reliance. He that cannot abide the storm without flinching or quailing, strips himself in the sunshine, and lies down by the wayside, to be overlooked or forgotten.

CLOVER.

Clover has an importance to farmers which can scarcely be over-estimated, and we fear it does not receive sufficient consideration. As furnishing a large amount of excellent pasture and fodder for domestic animals, and as a means of keeping up the fertility of our farms when plowed under, it deserves a prominent place in the system of rotation adopted by those who follow either a mixed or a grain-growing husbandry. As a general rule every acre of winter grain should be "seeded down," as it is termed, to clover in the spring, to remain for at least one, and not more than three years, as a meadow or pasture.

The soil best adapted to the clover plant is that of a somewhat clayey character—such as will produce the best wheat crops. Any soil which will grow wheat will also produce clover. A deep, well-drained loam suits it well—on all ill-drained soils it suffers much from winter-killing, especially if the spring prove one of little snow and variable temperature. On light soils it needs the assistance of manure to prove profitable.

Clover is usually sown early in spring upon winter grains, and occasionally with oats and barley. With the latter it generally does well, especially if sown in good season. Upon wheat, we sow in March, when the season is sufficiently advanced to do so. While the light frosts continue, the slight cracking and heaving of the soil, through their action, will generally furnish a sufficient covering for the seed, though some recommend sowing later and harrowing in, arguing that this process not only covers the clover more perfectly, but benefits the wheat crop. When seeding with spring grains, it is usually sufficient to pass over with the rollers, sowing the clover-seed after the last harrowing.

The benefit which clover derives from plaster seems a "fixed fact in agriculture," not needing special remark in this connection. Hence they have become associated in the minds of most of our farmers as partners in the product desired, and the one usually accompanies the other. We think, however, that the sowing of plaster upon wheat fields seeded to clover is frequently deferred too late. The clover needs its aid when it first comes up, besides if sown late, the wheat is injured by its causing too rank a growth of straw at the time when the grain is forming. We should sow plaster as early as April, if possible, upon wheat, and upon spring grain seeding as soon as it fairly appeared above ground.

The amount of seed necessary for an acre depends upon the character of the soil, but there seems no disposition to seed too heavily. Loamy soils need less than clayey, and the growth of the crop with which it is seeded, whether large or small, has considerable influence. A peck to to the acre is little enough—some use more, but many less. It is poor economy to sow but half enough to cover the surface—the pasturage and hay are of much less value, and the saving of five dollars in seed often entails a loss of five times that amount in the product.

There are many varieties of the clover plant, but those most grown are the common red, or Northern clover, of which we believe there are two varieties—the large, or pea-vine clover, and the medium—as it is called, perhaps, from its lying between that and the Southern or small variety. The medium kind makes the best hay, and is equally valuable as a green manure.

We have already remarked upon the great value of clover for this latter purpose. Some of the reasons why it is so may be thus briefly stated. Clover takes less from the soil and more from the atmosphere, in proportion to the feeding and manuring value of its product, than most other plants. It has numerous roots, long, bulky stalks, and abundant leaves, each supplying vegetable matter to the soil. A luxuriant growth of clover is an excellent preparation for any and every crop. Its far spreading roots loosen and deepen the soil, and bring to their support and to the surface the elements of fertility below the reach of most other crops. This, too, is the reason why clover delights in a deep, fresh soil, and why, after subsoil plowing, it is so certain to succeed.

Other considerations in regard to clover might appropriately be presented, and may form the subject of another article.—*Rural New-Yorker.*

For the New England Farmer.

ABOUT LIGHTNING RODS.

MR. EDITOR:—In the July number of the *Farmer* I notice an article recommending Lyon's patent copper lightning conductor; which article also contains a statement of Professor CHARLES DEWEY, of Rochester, N. Y., to the effect that—"It is agreed by philosophers that the conduction of copper is from six to eight times that of iron, and that in either metal the conduction is dependent upon the surface, and not upon the solid contents of the metal," &c.

Now the matter of lightning rods is of very great consequence to the farming community, especially in this vicinity, where scarce a summer passes but more or less valuable property falls a prey to this subtle element. Yes, hundreds and even thousands of dollars worth of property are destroyed every summer in our own town. And since this is the case, is it not of vast importance that the community should be furnished with definite knowledge as to the means of protecting their buildings from the effects of lightning, both as regards the best, and the cheapest way, and not be left to choose between the conflicting statements of a score of lightning-rod peddlers, who are themselves as ignorant of the principles of electricity as most farmers, to say the least.

The principles that govern the electric element are well established, and hence may be known by every one who will take the pains to inform himself. In Franklin's time a good substantial iron rod, fastened to the building with saddles of wood instead of glass fixings, such as any man might put

up for himself, was deemed all sufficient to carry harmlessly to the earth any shock of lightning that might seek a passage. And I may here say, that I am yet to learn that that rod has ever proved false to its trust when kept in proper repair. But the work of the great discoverer and philosopher has been superseded by a multitude of new inventions, with the pretended discovery of new principles. I doubt the principle of Prof. Dewey's statement, for many reason which I have not space to give. But if it be true that surface is all that is required in a good lightning conductor, then will not some one please give us an answer to the following points:—1. If surface is all that is necessary, will electricity ever leave a metallic surface for any other passage, such as wood, any more than water will turn from a downward course of its own accord and flow up hill? 2. And if not, what is the use in passing the rod over glass, since in every shower said sheets would be covered with water, which is of itself a good conductor? 3. Therefore, why not dispense with glass fixings altogether? And 4, since metallic surface is all that is necessary, why cannot every farmer furnish himself with a lightning conductor possessing double the surface of Lyon's rod, (since the thinnest sheet of copper is as good as the thickest, no matter if it is as thin as paper, fastened to a strip of pine board, is all that would be required,) at an expense not exceeding one-fifth the expense of Lyon's rod?

Again, it is stated by Prof. Dewey, that copper has from six to eight times the conducting power of iron. This statement is at variance with that of Mr. Davis, of Boston, in his Manual of Magnetism, page 38, where he states the conducting power of the two metals as follows: copper 17,050 grains; iron 7,800 grains. Now that does not look like six or eight to one. Who is right? We want more light; we want definite knowledge upon this subject, and less of that cutaneous affection called guess-work. L. Baker.

East Templeton, July 30, 1858.

HOW COFFEE CAME TO BE USED.

It is somewhat singular to trace the manner in which arose the use of the common beverage, coffee, without which few persons, in any half or wholly civilized country in the world, would seem hardly able to exist. At the time Columbus discovered America it had never been known or used. It only grew in Arabia and upper Ethiopia. The discovery of its use as a beverage is ascribed to the superior of a monastery, in Arabia, who, desirous of preventing the monks from sleeping at their nocturnal services, made them drink the infusion of coffee, upon the report of some shepherds, who observed that their flocks were more lively after browsing on the fruit of that plant.' Its reputation spread through the adjacent countries, and in about 200 years it reached Paris. A single plant brought there in 1714, became the parent stock of all the French coffee plantations in the West Indies. The extent of the consumption can now hardly be realized. The United States alone annually consume it at the cost of its landing of from fifteen to sixteen millions of dollars. You may know the Arabia or Mocha, the best coffee, by its small bean of a dark yellow color. The Java and East Indian, the next in quality, are larger and of a paler yellow. The West Indian Rio has a bluish or greenish, gray tint.

For the New England Farmer.

SHEEP AND FLEECES.

Mr. Editor:—There is a statement going the rounds of the papers, of the great weight of fleeces sheared by J. Smart, and others, of Vermont, which I am very glad to see. It shows that there are some, at least, who are trying to improve the quantity, and it is to be hoped, at the same time, the quality of their wool. A desideratum, certainly, for us New Englanders in this progressive age, when almost everything the farmer grows, except wool, is so much higher than formerly.

It cost but little, if any, more than half as much per head to keep sheep thirty to forty years ago, as it does at the present time. Then, good Spanish merino wool brought from sixty to eighty cents per pound. Hence the necessity of many fleeces to make wool-growing a profitable business, was not so great as it is now. The cost per head of keeping a flock of sheep, that will shear four pounds of good wool, is but a trifle more than that of one that will shear but half that amount. And with the present prices, and future prospects, the greatly increased cost of keeping, the necessity of many fleeces, together with good quality, is but a too self-evident fact to all intelligent wool-growers of New England, as the difference in the prices paid for heavy or light fleeces is comparatively nothing.

My sheep were poorly fed the first year, not one of them having anything more than ordinary keeping. I sheared 108; they were all well washed—in fact the cleanest that I ever saw a flock. I did not keep an account of the weight of fleeces, but should not be willing to sell it for anything less than five pounds per head. I weighed several yearlings' fleeces that weighed from six to six and three-fourths pounds each. I sheared two full blood Spanish Merino bucks, that made nine and one-half pounds each; and one three years old that sheared twelve pounds; and one three-quarters blood Spanish and one-quarter French Merino, two years old, that sheared eleven and one-half pounds, and as to quality and condition, I am willing to compare it with any in Vermont. J. B. Freeman.

Lisbon, Grafton Co., N. H., 1858.

For the New England Farmer.

RE-SHINGLING OLD ROOFS.

Mr. Editor:—I noticed in your paper some remarks from the pen of J. T. Adams, Esq., on re-shingling old roofs. He says his method is to shingle over the old shingles, thus saving the expense of removing them. In most cases the old shingles will pay for removing for our ladies to kindle fires. To obviate the difficulty of getting the building wet, if it should rain before it is finished, no more shingles should be removed than can be replaced by new ones in a short time. As for the roof being much warmer and tighter, I very much doubt. If the roof is properly covered, no snow or rain can beat under the buts of the shingles. As for the roo.

lasting one-third longer by allowing the old shingles to remain on, I think every practical man will differ from Mr. Adams, for if the old ones be left on in case of heavy rains, the old shingles, as well as the new ones, will get saturated with water. The old ones will retain the water for a long time, consequently, they will cause the new shingles and also the boards underneath to decay. My method is to remove the old shingles and replace them with new in a neat and workmanlike manner; and I believe it will cost less and will look much neater than if the old shingles should be allowed to remain on.

HENRY CROWELL.

Londonderry, N. H., 1858.

BUILDINGS AND FIXTURES FOR A 100 ACRE FARM.

"What Buildings and Fixtures are required for farming, profitably, one hundred acres, including timber lot, managed in the usual way of grain-growing and stock-raising combined?"

There is required a pleasant and commodious dwelling, with parlor, dining-room, sleeping-rooms, closets, kitchen, cheese-room, pantry, wood-house, cellar, cistern and well—all constructed in accordance with the best improved taste and judgment of the proprietor. Also, a barn 42 by 52 feet, elevated two feet from the ground on the upper side, having on one side of the barn floor stalls for horses, each 4½ by 14 feet; an apartment joining, for a cistern, at the further end of the stalls, 6 by 14 feet; and joining that, a granary, 10 by 14 feet; on the opposite side of the floor, a corn-crib, 14 by 20 feet; a mow for hay, 14 by 32 feet, and hay or Hungarian grass on the scaffolds; and a floor 14 feet in width. The horses should stand on a ground floor, on the upper side of the barn. The earth that is taken out for a cistern should be used for that purpose, and be covered with an abundance of sand to within a foot of the sills of the barn. The floor of the granary need be only one foot and a half from the ground, and may be let down below the sills of the barn to that depth. There may be under-sills, resting on shoulders in the underpinning, to lay the floor of the granary on. The floor should be made of oak plank, two inches in thickness, and the granary lined up to the sills of the barn with similar plank, to keep rats from intruding. The corn-crib, on the opposite side of the barn floor, may be made in a similar manner. If the corn is not sufficiently dry to keep well in so deep a crib, dry rails should be laid along, occasionally, through the middle of it, for ventilators. But what would answer for cribbing corn in Illinois, might be ruinous in the State of New York.

A wagon and carriage-house may be made on the upper side of the barn; and there should be a building for a hog-house, some 30 feet by 16, with a corn-crib and hen-house over the two rooms for hogs—there being free access from their feeding-room into a small adjoining yard.

Perhaps as good a shelter for calves as any other, is a rick of straw suitably built in a yard for them—being brined, from time to time, around, near and at the bottom of it. Sheep can find a comfortable shelter under the floor of the barn.—B. C. W., *in Genesee Farmer.*

TOOLS AND IMPLEMENTS FOR A 100 ACRE FARM.

"What Tools and Implements are necessary to farm it profitably on one hundred acres, including timber lot, managed in the usual way of grain-growing and stock-raising combined?"

There would be wanted 1 two-horse scouring plow, 1 one-horse scouring plow, 1 one-horse three-shovel scouring plow, 1 harrow, 1 spade, 1 barn-shovel, 1 wheelbarrow, 1 dung-fork, 2 pitch-forks, 2 hoes, 1 wagon, 1 two-horse reaper and mower combined, 1 horse-rake, 1 corn-sheller, 1 of the little cast iron grist-mills, provided they are found to be durable and to do good business, 2 sets of harness, 1 saddle and 1 carriage.

The best and most profitable way of planting corn that I have noticed, is to drop with the hand and cover with the hoe. When thus planted, it comes up enough better to more than pay for the extra trouble.

No person can raise grain cheaper, by cutting and threshing it with machinery; but the same help can grow much more with it than without it. —B. C. W., *in Genesee Farmer.*

MANURE MAXIMS.

At a late meeting of the Farmers' Club of the American Institute, Mr. T. W. Field read a paper on manures, in which he said:

The whole subject of manures may be stated in this proposition:

1. Manure does not waste so long as it is unfermented or undissolved, and these conditions may be effected by drying or saturation.

2. Fresh manure is unfit for food for plants.

3. Fermenting manure, in contact with inert matter, has the power of neutralizing vicious properties, such as the tannic acid of peats, and making it a fertilizer.

4. Manure wastes in two ways—the escape of gas and the dissolving of its soluble salts.

5. The creative power of manure, mixed with other substances, is capable of multiplying its value many times.

6. The value of manure to crops is in proportion to its divisibility through the soil. The golden rule of farming should be small quantities of manure thoroughly divided and intermingled with the soil.—*Country Gentleman.*

WATER.

Potatoes contain 75 per cent. (by weight,) and turnips no less than 90 per cent. of water. A beafsteak, though pressed between blotting paper, yields nearly four-fifths of its weight of water. Of the human frame, bones included, only about one-fourth is solid matter (chiefly carbon and nitrogen,) the rest is water. If a man weighing one hundred and forty pounds was squeezed flat under a hydraulic press, one hundred and five pounds of water would run out, and only thirty-five pounds of dry residue remain. A man is, therefore, chemically speaking, forty-five lbs. of carbon and nitrogen diffused through six buckets of water. Berzelius, indeed, in recording the fact, justly remarks that the "living organism is to be regarded as a mass diffused in water;" and Dalton, by a series of experiments tried on his own person, found that of the food with which we daily repair this water-built fabric, five-sixths are also water.—*Scientific American.*

LETTER FROM MR. BROWN.

Lowell, Sept. 15, 1858.

Dear Sir:—I came here this morning to attend the annual Exhibition of the *North Middlesex Agricultural Society.* It is the elder daughter of the old Middlesex Society, whose meetings are holden at Concord. She has another bouncing child in the south part of the county, who calls her admirers around her annually at Framingham. They are both healthy, active, well-bred and useful children, and are a credit to the stock from which they sprang.

This society has ample and pleasant grounds enclosed with a substantial fence, near the city, where the stock is exhibited, and the horses are put upon their paces. The plowing match took place near by, and was contested by three double teams, four horse teams and five single teams,—twelve in all. The ground was a sandy loam, with a thin sward, and did not call for [the exercise of any special skill to produce good work. A variety of plows were used, and among them an iron plow, manufactured at South Boston, which I had not seen before. It appeared to be symmetrical and handy, and did good work. There was also a new implement on the ground which I should call a *plow-harrow*, because the frame is shaped like a harrow, while the teeth are a combination of a double-mould board plow and the common iron tooth of the harrow. A tooth comes to an edge in front, and as it recedes, the sides flare out, making a sort of mould-board. I should have been glad to see it in use, and judge of it by its work, but it was not put in operation while I remained upon the ground. The show of cattle, horses, swine, poultry and sheep was not large, but contained some fine specimens in each department.

The exhibition of Fruits, Vegetables, and Household work, took place in Huntington Hall, in the city, and was very fine. There was an excellent display of peaches, plums, grapes, among them some fine samples of the Concord, apples, pears, &c. The show of vegetables was large, numerous in variety, and they were of the first order. There was little machinery, and no farm implements but a horse-rake. Mr. O. Nichols had his portable cider-mill, and I thought it a good time to have fifty bushels of apples present and the operation of cider-making going on.

A procession was formed at this place and marched to French's Hall, where a good dinner awaited the hungry throng, and where they were soon inducted into a new series of ceremonies. The hall was clean, cheerful and attractive, as was the dinner itself, and everybody seemed to be in good nature with himself and all the rest of the world. A brief welcome from the President of the Society, Hon. Tappan Wentworth, and an appropriate blessing invoked by the Rev. Mr. Sargent, of Lowell, were all the ceremonies that kept nervous hands from the numerous weapons that lay in repose by the sides of long lines of shining plates. The next twenty minutes was a period of apparently great gastronomical enjoyment, and there followed a gradual cessation of the sounds common on such occasions, and the President announced the Rev. Frederick Hinckley, of Lowell, as the orator of the day. He occupied forty or fifty minutes, and was listened to by a most attentive and gratified audience. His subject was—*The Farmer and the Man—or Agriculture in its Ministry to Manhood.*

The subdivisions of this branch of his subject were, upon the *Ends of Labor; Means of Living; Success in Avocation;* and *Development of Manhood.*

The next general division was upon the *Elements of Manhood, fostered or involved in the Farmer's Life,* and the topics discussed were,—*Physical Vigor; Mental Activity; Social Sympathy; Love and Appreciation of the Beautiful; Moral Integrity and Religious Faith.* All these points were skilfully touched, and enforced in a clear, earnest and persuasive manner, showing that the speaker had given *the wants in agricultural life* considerable thought and investigation. What he uttered fell from his lips as though every thought had just been nestling warmly around his own heart, and thus it fell upon sympathetic hearts where it will take root and bear fruit abundantly. It was an address abounding in valuable suggestions on the poetic, or home side of agricultural life. We have precepts without end on improvement in turning furrows and making manures; now we need them on the associations and sympathies of rural life; on the value of varied and extended knowledge to the farmer, as well as to those engaged in any other avocation.

As farmers, we are indebted to the clergy for the introduction of many valuable fruits and flowers, and examples in practical horticulture and agriculture, and for several of the best works on these subjects. They have education, disposition and opportunity, and when they have discovered or experimented, possess the ability to relate to the world the results of their labors.

After the address, Wm. G. Lewis, Esq., a delegate from the State Board of Agriculture, delegates from other societies, and several other gentlemen addressed the audience. The grave designs of the occasion were enlivened by anecdote and pleasant illustration, so that "the table was often in a roar," and no one present seemed to know that there was such a thing as "dull care" in the wide world.

Reports were then read, premiums awarded,

and such other matters considered and concluded as demanded attention, and the *Farmers' Festival* in North Middlesex closed for the year 1858.

To-morrow commences their Horse Show, on the fair grounds, to be continued two days. But what means that wind, moaning through the pines! It comes from the sea, is raw, and filled with chilly vapor! Who knows what terrible pressure is driving it in, and whether it may not fall in drenching torrents before the grand cavalcade shall assemble in the morning. It is near the period when the sun enters one of the equinoctial points, you know, and we always have a flurry in the elements about that time. We shall see. Yours, very truly, SIMON BROWN.

JOEL NOURSE, ESQ., BOSTON.

For the New England Farmer.

CROPS IN PRINCE EDWARD CO., C. W.

Wheat is badly eaten by the weevils, so that but little of the first quality can be found. Rye is about an average crop. The last few years this grain has been much more extensively sown than wheat, which was formerly a staple crop, but recently it is not considered reliable. This is considered by some an evidence of poor farming, and not, perhaps, without good reason. At any rate, land that once bore good crops of wheat will not do it now under the same system of culture. Oats, barley and peas are good where the land was not too wet in the spring. Such land, however, was scarce here last spring, owing to frequent and very heavy rains. Corn grows well here, though less attention is paid to its cultivation than to other crops. The yield this year, on suitable land, will be good. I planted the "King Philip" variety, and in 88 days from planting I found some ripe enough to grow. The hot weather of the first ten days of this month was very favorable. Potatoes are rotting in some locations, and the tops nearly all died the first week in this month, late planted ones dying as early as others. This is considered by some a sure indication of disease, and they predict a general failure. It is to be hoped they are false prophets. Early potatoes are very fine, and as far as I can learn, are free from infection. Apples are almost a total failure. I think I never saw so few. Plums are plenty in some places, generally native varieties, such as the Blue and the Green Gage, and a larger blue plum.

I have referred to the failure of land to produce as well as it formerly did, and perhaps it may not be out of place to mention what I believe to be a prime cause of deterioration,—that is, a waste of manure. While riding by a good farm a few weeks ago, after a heavy shower, I noticed a large, black stream running from the barnyard and depositing its treasures in the sandy gutter of the highway, a distance of thirty or forty rods, when by digging a ditch across the road not more than four of five rods, it might have been conducted into a beautiful field. Such instances are too common.

9 *Mo.* 13*th*, 1858. L. VARNEY.

THE POTATO DISEASE.

Last week we gave some illustrations of the potato leaf and tuber, and of the insect preying upon them, together with an account of Mr. HENDERSON'S discovery. We now place before the reader the discovery of Mr. REED, to which we referred in that article. Mr. Reed has laid before us a mass of evidences going to substantiate what he states, but for which we cannot find space. His statement is as follows:

IMPORTANT MICROSCOPIC DISCOVERY SHOWING THE CAUSE—PATENT GRANTED FOR THE REMEDY.

MESSRS. EDITORS:—The miscroscopic examinations which I have made of the potato plant, during several summers past, has revealed facts of vast importance to agriculturists, both in America and Europe. In 1845 the United States Patent Office published various communications, letters, extracts, &c., upon the potato disease. The first scientific examination in the United States was made in the State of New York in 1844. The publication of this investigation induced many persons in this country to form opinions that fungi caused the disease. The same opinion also prevailed in Europe. Atmospheric influence was another theory. Insects upon the vines and leaves another.

My microscopic examination and experiments commenced at Waltham, Mass., in 1851. In June of that year, I found the under leaves on my potato stalks turning yellow—some quite dead—while the tops and leaves and also the leaves and stalks of other hills continued quite thrifty and green. This peculiar circumstance, thus early in the season, induced close observation and careful examination into the phenomenon. A query naturally arose—can fungus or atmosphere act thus partially upon the plant? Is there not some other predisposing cause prevailing? From this investigation I felt confident that insects or worms had attacked these plants at the *roots*.

Acting from this impression I examined the roots, but with the natural vision no insects were found. The microscope, however, revealed myriads of insects on the seed tubers, roots and stalks *under ground*. The attack upon the latter, at the lower joint, was visible in spots or marks resembling *iron-rust*.

Potatoes which I had in jars and flower-pots in my shed, covered from any exposure, (experiment tubers) exhibited, under the microscope, similar insects—and tubers taken from my cellar, at this time, had insects on those which were sprouted. Thus in *three separate and entirely dissimilar positions*, insects, similar in every respect, were found, evidently subsisting upon the sap of the sprouts and vines. This revealed to me unquestionable evidence, that, during the early growth of the plant, insects' ravages produced deterioration by the draining of the sap from the vital part—thus causing the disease. The insects, being only microscopic, rendered it extremely difficult to discover the nidus or hibernating spot of their eggs.

Early in my researches, however, I became satisfied, from the position of the *young* insects, that the eggs would be found near or under the eyebrows of the potatoes. This proved to be cor-

rect. It was not until 1856 that I *first* found the eggs. They are found imbedded in the very sprouts and in the skin near the eyes, but only with a powerful microscope and by the light of the unclouded sun can they be found. During the period from 1851 to 1856 my experiments in cultivation and otherwise were continued. Since the latter date I have watched as before, (sealed in glass jars and otherwise,) the development of the tubers, and the embryo progress of the eggs to the first animate motion of the tiny insects, and their attack upon the tender sprouts; the effects of their ravages, and the progress of their poison infused into the vines, causing the malady. This insect is the *Alphis*.

The particulars of my discoveries and my opinion on this subject were communicated to the Governor and Council of Massachusetts in August, 1851, answering a resolution of the Legislature, passed that year, soliciting information on this subject. And the fact is a matter of record in the State Department. For reasons of my own, my communication was to remain with the seal unbroken, unless at my request, until 1856.

I have thus placed before the reader the time, original circumstances of discovery, as also the final development showing the *cause* of the potato disease.

The facts and authenticated proofs attached thereto, and a multiplicity of other similar evidence, has been placed before the United States Patent Office, there to remain. They are deemed adequate to settle the question, positively, as to the *cause* of the disease. I need say only a word more. Let me briefly add, that, by repeated experiments, I have *discovered a practical remedy for the disease*. The tests of cultivation are shown by the evidence of my immediate neighbors, at Waltham, Mass., which proves the efficacy of my remedy.

After a thorough and most rigid investigation before the United States Patent Office, I have secured letters patent from the United States Government for the right to apply the remedy. I am prepared to dispose of rights to use the remedy. Individuals wishing to possess the same, for States or counties, will apply by letter, or otherwise, to the undersigned.

Baltimore, 1858. Lyman Reed.

GRAFTING THE ORANGE PLANT.

Sir:—In the May number of your excellent journal I notice an inquiry by your North Bridgewater correspondent, Austin C. Packard, on the mode of grafting an orange plant, to which I perceive no reply has been made. Permit me, therefore, to occupy a portion of your space, while, for his information, I detail the *modus operandi*.

Grafting is best performed in Spring, when the plant begins to push forth vigorously. The scion must be a strong shoot of the preceding year's growth, about three eyes in length. The essential conditions to ensure success—a perfect union of the *liber* or inner bark of the stock with the *liber* of the scion—a slight bottom heat if convenient, though not absolutely necessary; shade, and a confined atmosphere, to secure moisture until they are perfectly united, in order to prevent evaporation from the surface of the scion, and to retain its absorbing powers in action. Having thus premised, cut from the side of the stock at the height at which it is wanted to work it, and in a longitudinal direction, a sloping piece about an inch and a half long, and in width equal to the diameter of the scion at its lower extremity, against which, the latter, somewhat thinned down to about the same length, yet not so deep as to reach the *medulla* or pith, and retaining its two upper leaves, is to be applied, with the *liber* of both in contact the entire length of the cut on one side at least, and bound round firmly with coarse woolen thread, or, what will answer as well, a piece of lamp-wick, until the joint is entirely covered. Pinch off the points of the branches on the stock if any, and all young shoots as they arise, in order that all the sap possible may be impelled into the scion. After it has made shoots an inch or two in length the tieing must be loosened and the head of the stock cut off at the joint. The proper time may always be known when the cellular deposit is observed on the edge of the scion, uniting both scion and stock.

Boston, Aug. 9, 1858. Thomas F. Walsh.

For the New England Farmer.

LIGHTNING, AND BARNS WITH NEW HAY.

Mr. Editor:—In a late *Farmer*, "P." asks whether barns filled with new hay are more liable to be fired by lightning than at any other time, or than any other building? If so, the reason. That barns are struck at that season more frequently than at any other time is true. Statistics gathered from the most careful observations show that about seven-tenths of the buildings burnt by lightning are barns. And most of these disasters occur during the curative state of the hay, which time continues some three months from the begining of haying.

Why are barns more liable to be thus burnt by lightning? New hay contains much gas, especially carbon. All of the hay is highly charged with electricity, so that the whole mass becomes a most powerful electric battery. All being very combustible is sure to fire if the lightning strikes it. The all important inquiry is, can conductors be placed on buildings so as to protect them? Electricity, though the most powerful and extensive element in nature, is, like every other element, regulated by law. If we understand the laws by which it is governed, the lightning can be managed and controlled as well as any other element. This is a mighty, subtle, active agent; going, when it moves, at the speed of more than two hundred thousand miles in a second, travelling more than eighty miles faster than the rays of light coming from the sun. Subtle as this fluid is, and important as the laws which govern it are, men are found engaged in erecting lightning rods to protect our buildings, who do not understand the first principles of this important science. Not but that they, like the false prophets of old, make high and loud pretensions, yet many now, as then, are deceived by them. If we would not be humbugged in so important a thing as the protection of life and property, let us employ men who are thoroughly acquainted with the business.

Yours truly, A. H. Reed.

Mendon, August, 1858.

EXTRACTS AND REPLIES.

WILLOWS FOR FENCE.

Allow me to make a few inquiries concerning willows for fence. I have a large meadow that needs fencing—will branches taken from the common willow tree and set in the mud, make a durable and good fence around it? If so, what season of the year, how large and how deep should they be set, and how far apart? Will they grow in the form of the weeping willow by reversing the ends? J. S. ELLIS.

Boston, Sept., 1858.

REMARKS.—Willows will grow readily, cut in April or early in May, and set from one to two feet in the ground, where it is usually moist through the summer. If they are intended for fence without other aid, they must be planted quite close, within two feet of each other, and then headed down annually so as to dwarf them. They may be set much further apart, and when stiff enough have rails or strips of board nailed across them, which will be sufficient to keep out cattle, but not sheep or swine. A willow stick, whether half an inch, or an inch and a half in diameter, will grow if set under favorable circumstances.

A willow fence answers the purpose very well where the land is liable to be inundated, or where the posts are badly thrown by frost.

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A NEW STUMP PULLER.

Your Pittsford correspondent, who wants his pine stumps put into a fence, may address JULIUS M. NORTH, of Shoreham—who has a machine that extracts stumps on the same principle of the large two-wheel stump machine which he describes. The machine is moved on four wheels, a common ox-cart in front, (minus the box or body,) and two trunk wheels in the rear, with a pulley attached to the power to be used when necessary. The stump frame was borrowed from a lever stump machine purchased here about twenty years ago, which was a failure, as every stump machine will be that extracts the stumps by manual strength only, at the present or past prices of labor. HIRAM RICH.

Shoreham, Vt., Sept., 1858.

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CURE FOR THE POISON OF IVY.

In answer to a request for a cure for the poison of ivy, I send you a receipt, which its use for ten years warrants me in considering a specific. It is as follows: take a handful of the *lobelia inflata*, make an infusion by pouring on it in a tin or earthen vessel, a pint of *warm* water, not hot; set it about an hour in a warm place, reserve a little to sip occasionally, and wash with the remainder frequently and thoroughly the parts affected, and a speedy and certain cure will be the result.

This plant is easily known by its small, light blue flowers and bladder-like capsules, and as if to be an antidote ever at hand, grows wherever ivy is found, on high or low, wet or dry ground. The green plant is best. It may cure dog-wood; it will be safe to try it. M. A. D.

Rockport, 1858.

CURE FOR A WIND SPAVIN.

I saw a communication in your valuable paper signed "H. S. G.," of West Bethel, Vt., in relation to his colt, wishing to know whether it was spavined, and what remedy to apply.

I should call it a "wind spavin." It may be cured with the following remedy: take equal parts beef's gall, neatsfoot oil, brandy and spirits of turpentine; shake well together, and apply it thoroughly once a day until cured. I have cured them in this way in eight weeks.

Hill, N. H., 1858. N. F. MORRILL.

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THE WAY TO HAVE FRESH TOMATOES WITHOUT SELF-SEALING CANS.

Some afternoon when you think everything will be killed with frost at night, pull up your vines that are loaded with green tomatoes, and hang them in the cellar; they will ripen off finely. I took some from my cellar last Christmas day, that were very nice. J. C. NORTON.

Bridgewater, Sept. 14.

BOYS' DEPARTMENT.

THE HAUNTED HOUSE.

Speaking of ghosts, I have heard that some years ago there was a lone house standing by itself, near a plantation, not far from Guilford. The house nobody would ever take because it was haunted, and strange noises heard in it every night after dark; several tenants tried it but were frightened away by the noise. At last one individual, more courageous than the rest, resolved to unravel the mystery. He accordingly armed himself, and having put out the light, remained sentry in one of the rooms. Shortly he heard on the stairs, pit pat, a full stop again. The noise was repeated several times, as though some creature, ghost or no ghost, was coming up stairs. At last the thing, whatever it was, came close to the door of the room where the sentry was listening; his heart, too, chimed in with pit pat rather more than it was wont to do. He flung open the door, hurry-skurry, bang; something went down, down stairs with a tremendous jump, and all over the bottom of the house the greatest confusion, as of thousands of demons rushing in all directions, was heard. This was enough for one night. The next night our crafty sentry established himself on the first landing, with a heap of straw and a box of lucifer matches. Soon all was quiet. Up stairs again came the pit pat, pit pat. When the noise was close to his ambush he scraped his match, and set fire to the straw, which blazed up like a bonfire in an instant; and what did he see?—only a rabbit, who stood on his hind legs, as much astonished as was the sentry. Both man and beast having mutually inspected each other, the biped hurled a sword at the quadruped, who disappeared down stairs quicker than he came up. The noise made was only the rabbit's fore and hind legs hitting the boards as he hopped from one stair to the other. The rabbits had got into the house from the neighboring plantation, and had fairly frightened away, by their nocturnal wanderings, the rightful owners thereof. The more courageous sentry was rewarded for his vigil, for he held his tongue

as to the cause of the ghost. He got the house at a reduced rent, and several capital rabbit pies made of the ghosts' bodies into the bargain.—*Buckland's Curiosities of Natural History.*

SHUN AFFECTATION.

There is nothing more beautiful in the young than simplicity of character. It is honest, frank, and attractive. How different is affectation! The simpleminded are always natural. They are at the same time original. The affected are never natural. And as for originality, if they ever had it, they have crushed it out, and buried it from sight, utterly. Be yourself, then, young friend! To attempt to be anybody else is worse than folly. It is an impossibility to attain it. It is contemptible to try! But suppose you *could* succeed in imitating the greatest man that ever figured in history, would that make you any the greater? By no means. You would always suffer in comparison with the imitated one, and be thought of only as the shadow of a substance—the echo of a real sound—the counterfeit of a pure coin! Dr. Johnston aptly compared the heartless imitator—for such is he who affects the character of another—to the Empress of Russia, when she did the freakish thing of erecting a palace of ice. It was splendid and conspicuous while it lasted. But the sun soon melted it, and caused its attractions to dissolve into common water, while the humblest stone cottages of her subjects stood firm and unmarred! Let the fabric of your character, though never so humble, be at least real. Avoid affecting the character of another, however great. Build up your own. Be what God intended you to be—*yourself*, and not somebody else. Shun affectation.

LADIES' DEPARTMENT.

TALKING IN ECSTATICS.

And now that I am upon this subject of talk, it will be well to say all I have to say upon it. It is a very common thing for young women to indulge in hyperbole. A pretty dress is very apt to be "perfectly splendid;" a disagreeable person is too often "perfectly hateful;" a party in which the company enjoyed themselves, somehow becomes transmuted into the "most delightful thing ever seen." A young man of respectable parts and manly bearing is very often "such a magnificent fellow!" The adjective "perfect," that stands so much alone as never to have the privilege of help from comparatives and superlatives, is sadly over-worked, in company with several others of the intense and extravagant order. The result is that, by the use of such language as this, your opinion soon becomes valueless.

A woman who deals only in superlatives demonstrates at once the fact that her judgment is subordinate to her feelings, and that her opinions are entirely unreliable. All language thus loses its power and significance. The same words are brought into use to describe a ribbon in a milliner's window, as are employed in the endeavor to do justice to Thalberg's execution of Beethoven's most heavenly symphony. The use of hyperbole is so common among women that a woman's criticism is generally without value. Let me insist upon this thing. Be more economical in the use of your mother tongue. Apply your terms of praise with precision; use epithets with some degree of judgment and fitness. Do not waste your best and highest words upon inferior objects, and find that when you have met with something which really is superlatively great and good, the terms by which you would distinguish it have all been thrown away upon inferior things—that you are bankrupt in expression. If a thing is simply good, say so; if pretty, say so; if very pretty, say so; if fine, say so; if very fine, say so; if grand, say so; if sublime, say so; if magnificent, say so; if splendid, say so. These words all have a different meanings, and you may say them all of as many different objects, and not use the word "perfect" once. That is a very large word. You will probably be obliged to save it for application to the Deity, or to His works, or to that serene rest which remains for those who love Him.—*Tilcomb's Letters to Young People.*

DOMESTIC RECEIPTS.

Important Hint in Washing Clothes.—The *American Agriculturist* asserts that the great secret of the success of nine out of ten of the washing fluids, mixtures, and machines which have been sold over the country for many years past, is not owing so much to the inherent qualities of the articles themselves as to the process of soaking, which they invariably recommend. If people pursuing the old-fashioned system of washing will simply take the precaution to throw all the clothing to be washed into water ten or fifteen hours before beginning operations, they will find half the labor of rubbing and pounding saved in most cases. Water is of itself, a great solvent, even of the oily materials that collect upon clothing worn in contact with the body, but time is required to effect the solution. Every one is aware of the effect of keeping the hands or feet moist for a few hours—the entire external coating of secretion is dissolved. The same effect is produced by soaking for a few hours clothes soiled by the excretory matter of the skin.

Home-Made Figs.—Will you encourage home manufacturers so far as to publish these recipes?

Pare and core pears, peaches, or quinces, (or tomatoes:) make a syrup, flavored with lemon peel. Boil the fruit till done, then drain it through a colander, and spread on dishes; place in the sunshine, or in a moderately heated stove, till nearly dry; sprinkle with loaf sugar; dry a little more; then pack them in boxes, and put in a cool place. Figs made in this way are considered superior to real imported figs. When tomatoes are used, they should be the straw-colored fig tomatoes.—*Lilly, in Zion's Herald.*

Erysipelas.—A correspondent of the Providence *Journal* says, that in ninety-nine cases out of every hundred, cranberries applied as a poultice will effectually cure the erysipelas. There is not an instance known where it has failed to effect a cure, when faithfully applied before the sufferer was in a dying state. Two or three applications generally do the work.